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[1] Knight, F., and Shelanski, H. A.: "Treatment of Acute Anterior Urethritis with Silver Picrate", *Am. J. Syph., Gon. and Ven. Dis.*, **23**, 201 (March), 1939.

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An Address.[1]

A SURGEON AS WHALESHIP OWNER.

By W. E. L. H. CROWTHER,
Hobart.

We were down in the Indian Ocean, after sperm, and
three years out;
The last six months in the tropics, and looking in
vain for a spout . . .
Five men up in the royal yards, weary of straining
their sight;
And every day like its brother . . . just morning
and noon and night . . .
"The Amber Whale."[2]

THE day of the *Festschrift* is not yet in Australia, so this narrative is to serve as my tribute to Robert Scot Skirving, doyen of clinical teachers of the Sydney school of medicine. It was not my fortune to have been one of his students; but of latter years I have shared richly in the inspiration that comes from his splendid personality and culture. Like himself, I have always been drawn to the sea; so when he wrote me "Your forebears dabbled with whaling . . . what about a paper regarding their ships and activities?", I felt that I should make the attempt. Here, then, is the paper; but how different, written at second or third hand, or from contemporary reports, from the direct and noble prose in which Dr. Scot Skirving has told of his duties and activities as surgeon to the *Palomar*, when in the golden days of his youth he sailed in her, south and then east, on the long, long journey to Australia.

[1] Delivered at the annual meeting of the Tasmanian Branch of the British Medical Association on February 13, 1943.

[2] John Boyle O'Reilly, who wrote "The Amber Whale", enlisted in the 10th Hussars and was sentenced to death for creating disaffection (as a Fenian) in his regiment. He was transported in 1866 to Bunbury, Western Australia. In 1869 he escaped in the American whaler *Gazelle*. In 1876, with the help of American supporters, he arranged the escape of his fellow Irish prisoners of 1866 from Western Australia. This was successfully accomplished by means of the American whaler *Catalpa*.

PART I.

In the same letter it is stated that "my Father for many years used to import Guano from the Ichabo Islands off the S.W. Coast of Africa. It came in a little barque of 300 tons and I used to be taken on board to see the stuff landed". I recall my own boyhood on the waterfront at Hobart. In the nineties, where Jones and Company now stands was called Macquarie Point, and on the slipway here large river craft were built. Near by, opposite the Steampacket Inn, was the West Coast wharf, from which small ships sailed for Macquarie Harbour, where silver, lead and copper mines were being opened up. Passing the berths of home and intercolonial steamers, many still with yards on their masts (for the use of sails when conditions were favourable), we came to our own particular haunt the New Wharf (built *circa* 1835). Here were the sailing ships. At the town end lay those, such as the *Harriet McGregor*, *Lufra* and *Ethel*, which regularly took our wool to London. Further along (Figure I) in an aroma of oil and Stockholm tar, with long rows of barrels of hard-won oil on the front, were the whalers—only the two, *Waterwitch* and *Helen*, the last of our great fleet. Those were the days when at midnight of December 31 the new year was rung in by apprentices on ships' bells all around the harbour. How eagerly, too, we looked for the return of our regular ships from England, and for the yearly children's party on the *Ethel*, when the holds were filled with wool and the hatches ready to go on, and we had the freedom of the ship. Captain Clunies Ross, whose daughter afterwards became my aunt, used to sit us down in his little saloon cabin with red plush seats, to such ship's fare as hard biscuits (large and small), dried prunes and raisins and the like.

Then there were the famous ships that came in from time to time. The *Southern Cross* was the first to land an expedition on the Antarctic continent. On her deck as a small boy I was presented to an old, old man, dressed as were all physicians at that time in a frock coat and tall hat. Sir James Agnew, for it was he, told me then how as a young man he had known Captain Clark Ross and Captain Crozier, when with the *Erebus* and the *Terror* they had made our port their base for the discovery of the Ross Sea, the great ice barrier and the main Antarctic mass. At this time (1838) Sir John Franklin built for the expedition an observatory, still standing in the grounds of Government House, where much of its research on magnetic variation was carried out. Many years later came Scott's ships the *Terra Nova* and the *Morning*, and Admiral E. R. Evans of His Majesty's Ship *Broke*, then a young lieutenant, was a warm friend of the family. Later again, we saw in the stream the *Fram*, perhaps the most famous ship in the world. Ammundsen came on shore and went to the post office, and from his telegrams we, with the rest of the world, learnt next day that he had attained the South Pole. The *Fram* was followed by the *Aurora* with Mawson, and only thirteen years ago the same great scientist with the *Discovery* again went south. This is not the place to dwell on the visit each year of the Royal Navy, with its many hospitalities given and received, and the reunions each summer of such gallant men and our own incomparable women. Yes, indeed, those were the days; how fortunate we were to have had them to look back upon before buckling on our armour for the sterner years ahead.

FIGURE I.
The waterfront, New Wharf, in the sixties.

My Informants.

As long as I can remember, I have sought out old men, enjoying their company and listening to their experiences. In my student days at the old hospital many of the patients were old sailors, often with gold ear-rings and heavily tattooed. From them came many of the then common cases of aortic aneurysm. We had in the wards too occasional sailors with mild scurvy. Later, when in practice, I tried to leave my visits to such old patients (and friends) to the end of the list, when, smoking and yarning, I heard much that I wish I could still remember. *Facile princeps* was Captain A. B. Robinson. He and his father, Captain J. W. Robinson, had each commanded ships with our house flag, a white C on a blue ground. His grandfather had landed in the colony, five years after it was founded, from the *General Gates*, an American whaler, and when long after he came to be buried, his body was found to be wrapped in the "Stars and Stripes". Captain J. W. Robinson commanded several whalers with outstanding ability and was for a time part owner of more than one, while Captain A. B. Robinson, after commanding at sea, took over charge of the guano establishments at Lady Elliot Island. Another such friend, Captain W. McKillop, a tall quiet man, gentle in speech and manner, who had spent a long life whaling, had worked his way from ship's boy to master. He knew far more than any man I have met of South Sea whaling, and fortunately before his death we were able to get him to put many of his experiences on record. Then, too, there was old Harry Power, who had sailed with Paddy Gilroy on the *Chance*. He was on that ship when Gilroy snatched a whale from the *Cachelot* in a hard blow and on a lee shore off the Solander. Those who have read Bullen's "Cruise of the *Cachelot*" will remember the incident. Others I recall are Gates, who had a maimed arm obtained in an encounter with a whale whilst with Kennedy on the *Asia*, and Prero, whose right leg was withered and atrophied since the day when a lance had pierced it, and worse than that, was withdrawn sideways, so that the two razor-sharp edges divided vessels, nerves and muscles. By all the rules he should have died of hæmorrhage in the boat. Prero, Da Sousa and Lopez were common enough names here, and denoted by their Portuguese origin that their forebears came with American ships from the Azores and Cape Verde Islands, where they joined for the cruise.

Lastly, there are the reminiscences of my father, E. L. Crowther, M.D. (1843-1932), who wrote them for me about 1908, when he was convalescing from a long illness. Apart from gleanings from the Press of the period, these are the authorities from which I have drawn my information, since what should have been the principal source, my grandfather's papers, including the ships' logs, journals of transactions at the guano islands *et cetera*, were all wantonly destroyed immediately after his death as being of no use.

The ships concerned were owned by John Hamilton and W. L. Crowther, my two grandparents, and Charles Seal, great grandfather of my wife. The period covered is from 1825 to 1870 approximately. John Hamilton was a merchant and had timber interests with Hokianga, New Zealand, where he lived for some years. He had one barque, the *Pet*, in the trade. This vessel was as a rule very slow, but at times capable of a fine turn of speed. Charles Seal, a pioneer merchant, from the twenties to his death in 1852, was perhaps the greatest shipowner in our history. His fleet included the ship *Pacific*, the barques *Eamont*, *Litherland*, *Southern Cross*, *Sussex*, *Prince Regent*, *Aladdin* and *Lady Emma*, and the brigs *Grecian* and *Highlander*, and others that I cannot recall. Some took whales from Behring Straits, the Sea of Japan and anywhere in the Indian and Pacific Oceans, while others traded to the China coast for tea or to Mauritius for sugar. Others again carried the exports of the colony to the old world. The *Eamont* was lost on the coast of Japan in May, 1850, and a most interesting account of the detention of the crew and of the men and manners of the Japan of those feudal days is given in the *Hobart Town Courier* of the time. Eventually after a long stay they were released and handed over to the Dutch factor at Dousma, and found their way home via Batavia. After her husband's death Phillis Seal carried on with the ships and actually added others to her fleet, and lost a fortune. The climax came when the master of the brig *Grecian*, cleared for a whaling voyage, picked up a lady friend at Botany Bay and disappeared into the Pacific. Over two years later he was arrested at Stewart Island and brought before the magistrate. What had actually taken place in the interval will probably never be fully known, but it was stated that among other activities some 130 men, women and children of the Friendly Islands were enticed on board to a feast in the hold. The hatches were then clapped on and the whole party was kidnapped and taken to South America.

Whales and their Habits.

Some description of whales will help in following the narrative. All whales come into two great classes, the

Mysticeti, which have whalebone lining the buccal cavity, and the Odontoceti, which have teeth. In the case of the sperm whale the teeth of the upper jaw are rudimentary.

The Mysticeti have huge mouths lined with whalebone or baleen, and their food is "brit", a minute form of marine crustacea, which moves in masses so dense as at times actually to discolour the surface of the sea. The whale swims with open mouth in these areas, and when its mouth is full, it strains the water through the fringes of the whalebone and swallows the brit. Its best known members were, in the north, the great Greenland or bowhead whale, and in southern latitudes the right, *alias* the black or southern whale. These forms are now almost, if not quite, extinct. The great blue whales, as well as the finbacks and humpbacks, still taken by the modern highly organized Norwegian whaling fleets, were too fast to be taken from open boats. The Odontoceti range in size from the great sperm whale through the killers to the common dolphin and porpoise. They are all toothed, and their food varies from the giant kraken or squid to flying fish and lesser fry. The sperm whales, now not molested, move in small herds or "pods" through the oceans by regular migration routes, whilst lone old bulls move and live apart from the rest.

In the early days of the colony the right or black whale used to visit our bays and estuaries in great numbers in order to calve, and from May to November of each year bay whaling was carried out from shore stations or from ships lying off the coasts. By 1840 these whales had been so harried that the few left ceased to visit our shores, and from that time the sperm whale was pursued from sea-going ships, either far afield (as, for example, on the middle, western or Japan grounds) or "off shore" (on a regular migration route such as our South-West Cape or the Solander near Stewart Island). The larger ships, each carrying four boats, went on long cruises of perhaps two years or more, whilst the brigs and schooners, with two boats, were based on Port Davey and towed their catches to that shelter to "try out" the blubber. When whales were sighted, the boats were lowered and rowed or at times sailed until close enough for the harpooner to dart his irons into the quarry. When it was fast the whale usually sounded (dived) and towed one or more boats until exhausted. Then the boat was cautiously brought close to the whale and the headsman, with a succession of deep thrusts of a lance into the "life", killed it. The carcass had then to be slowly towed back to the ship and made secure for "trying out". By means of tackle and pulleys, the long strips of blubber, sometimes eighteen inches thick, were got on board and there chopped into smaller pieces, boiled down into oil, and stowed below in barrels. The value of the oil depended on the market price and averaged about £500 for each whale taken. The crew were paid by the "lay"—that is, an agreed proportion of the value of the catch taken; it did not amount to anything much, perhaps only a few pounds after a long and unsuccessful cruise. Gates told me that Captain Kennedy, who was very fortunate, always gave a good gratuity to the man at the masthead who "raised" whales.

Ships and Men.

Elsewhere I have written of the origin of Crowther's interest in ships and of the voyages to California and Valparaiso, and of the transfer of interest to guano and whaling. This was almost inevitable, as Hobart Town in the fifties was the greatest whaling centre south of the line, many of the best ships being built, manned and fitted out from the Derwent. Crowther's whalers were the ship *Offley*, the barques *Isabella*, *Sapphire* and *Juno*, the brig *Velocity*, and the schooners *Elizabeth Jane* and *Flying Squirrel*. They were commanded by Captain J. W. Robinson, Captain A. B. Robinson, Captain Dart, Captain Saunderson, Captain Copping, Captain Abbott, Captain Pye and Captain Jacobs. Here are my father's memories of them, written in 1907; it should be remembered that he knew all these ship masters personally, and as a schoolboy had sailed on three of these ships to the neighbouring colony of Port Phillip and to New Zealand.

The *Elizabeth Jane*, a two boat ship and his most successful whaler, almost always cruised off the S.W. Cape and towed her catch into Port Davey and Researche Bay in order to try it out. Oil was then over £100 per tun and on one occasion two days' out from Hobart Town, she took a large sperm whale the oil of which was worth over £1,300.

The *Sapphire*, a fine smart little barque and a four boat ship, had not much luck. She came into collision in the early sixties and cost over £1,000 to repair. For many years a hulk in Melbourne she was broken up only four years ago.

I add here some information gleaned from Captain W. McKillop, who served later as both boat-steerer and second mate on the *Sapphire*:

This little ship has her place in history. She arrived in the Thames on Nov. 23, 1852, with the first of the precious export of gold from Ballarat. On that voyage she carried 14,668 ounces, and her Master (R. Fox) was congratulated by the owner on his success in securing a crew, when other ships had been tied up for weeks, in their endeavour to do so. I remember on one eventful voyage the Captain was killed while cutting in a whale. The ranging gear parted and he was struck with part of the heavy chain and killed instantly. One of the crew also met his death through being jammed between two huge oil casks, that had become adrift in the forehold, that they were trying to make secure. By the way, the wraith of this poor fellow was often seen by crews on subsequent voyages, in stormy weather. He had often been seen aloft at night when furling sails, by the men on the yards, and frequently groans from the forehold would disturb some restless sailor in the forecastle.

McKillop was himself badly injured on the ship when a whale stove the boat he was in, and he rejoined in time to be present when Captain McGaffin collapsed on the poop and died of a stroke as the *Sapphire* was working into Half Moon Bay, Stewart Island. He was buried on the Neck beside two Tasmanians, Captain Sherburd and his son, who had been wrecked here on the *Pacific*, and had settled on the island. To resume my father's narrative:

The *Isabella* was never a very lucky ship and seldom more than paid for her outfit. The *Offley* [Figure II] had been in the Oporto wine trade before coming to Tasmania. He had her carrying timber for his contract for the Sandridge (Port Melbourne) Railway Pier, in the early fifties, and took her from that to convert her to whaling. She had always fair catches and at times carried out a combined voyage for whales and to bring back guano from Bird Island in the Coral Sea.

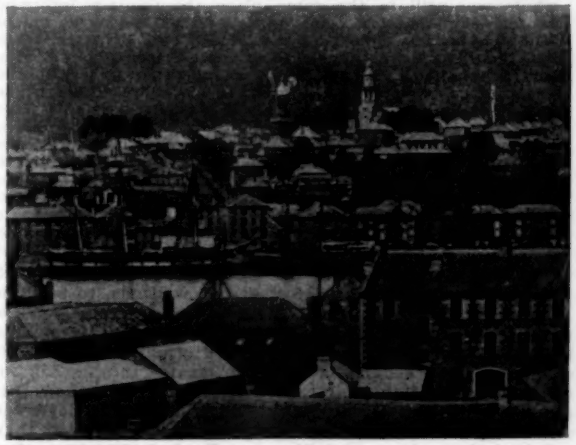

FIGURE II.
The *Offley* at the New Wharf, about 1866.

The *Velocity* [Figure III] whaled as a rule with indifferent success, and on one occasion off the Islands she took six whales in a day. The blubber was got on board, but the weather was so hot that most of it melted and ran overboard and into the hold among the fire wood and casks. She was built in Nova Scotia for service on the Grand Banks of Newfoundland, and was always an extremely dry ship, water rarely coming on board even in the heaviest seas. She sank

off Government House Point a few days after the death of my Father. As a boy I went down to the *Offley* when she was at anchor near Passage Point "trying out" an 11 tun whale. The blubber was over one foot thick and was like fresh pork. I cooked some potatoes in the boiling fat and they were beautifully browned and delicious. The Head or rather the top of it, the "case", with the Spermaceti in it, over one tun, was on deck as they got more oil out of it in this way.

FIGURE III.
The *Velocity* on MacGregor's slip, *circa* 1870.

The *Flying Squirrel*, Schooner, when off the S.W. Cape fastened to a Bull Sperm Whale. Instead of sounding as they do 99 out of 100 times, it settled down in the water with its head only clear. The boat pulled up to try and get a chance to lance it when it came straight at the boat open-mouthed. It being impossible to get out of its way, the boat was cleanly struck with its lower jaw, the side smashed in and all the crew thrown into the water. With that it was curiously enough contented. The schooner was a two boat ship with one spare boat on board. The other boat picked them up, took them on board and came away again with the spare boat in company. The Whale repeated its tactics, let the boat fasten, then came straight at it, smashed up No. 2 boat just as he had done with the first. Again it was content, so the crew were picked up and put on board, and then the boat with the smashed boats in tow, wished the whale good bye—starting for Hobart. As the whale was still in the same place the Captain informed another ship that had come up, but he refused as he stated "the whale has deliberately attacked two of your boats and smashed them, giving them no chance to lance him, so why should I have a better chance than you had and might come off even worse, with loss of life". This whale in time, new boats, gear etc. cost £500, and this would have been his value if taken. It was the only case I ever knew of among our whales where a whale knew its power and used it. I saw the boats with their sides completely knocked out. Being made of Huon Pine they floated to the last plank. The oars of Ash could each float a man, so as a rule, if not struck by the whale's underjaw in the case of a sperm whale, or by the tail in the case of a Right Whale, a man would have a good chance of being picked up alive.

It is of great interest in the literature of whaling, which includes some of the greatest of our writings, to see this theme of Moby Dick, the white whale of Herman Melville, constantly recurring. I have spoken with many of our old whalers, men who have never heard of this writer or his immortal work, and again and again they speak of happenings within their experience which go to show that many of these old lone bull sperm whales were possessed of exceptional sagacity and the will to attack rather than defend themselves—"intelligent malignity", Melville called it.

Here are two instances in the words of Captain A. B. Robinson, once Master of the *Velocity*:

Speaking from memory—my Father in the *Offley*, about 1859 off Cape Barren Island, had four boats stove and had to return to the ship for repairs by nailing new canvas over the broken parts, and after being fast to the whale all day, bad weather coming on, had to cut from it and went back to the ship, and next day at noon sighted the whale again and managed to get fast again and killed it and cut it in.

Another case in the *Othello* about 1861, off Cape Howe about 60 miles, was fast to a large whale all day before they had a chance to kill it, it smashed up one boat completely and stove three others, in both cases the whales tried out 125 Barrels.

The Bomb Lance (or Gun).

Returning to the incident of the *Flying Squirrel* off the South-West Cape, my father goes on:

One thing my memory does not recall is had they a bomb lance or gun in the boat. For I do remember my Father afterwards saying, "if another such whale was met with, if possible, fire inside the jaws, at any rate the explosion might cause him to alter his plans". This makes me recall how the bomb lance was evolved by my Father from a piece of metal one of our whalers cut out of a whale and brought to him. By careful thought a cylinder was made to hold about 8 oz. of powder. Then a tube with some sort of wings to fix it in the barrel. Then to make a fuse that would burn just long enough to get inside the whale and then explode. All sorts of compositions were tried. . . . All was ready but the gun, so he bought a duck gun and drove with myself and Capt. Robinson, who had obtained the piece of shell that had started the investigation, to Long Beach. I had some trouble to get him . . . not to fire it from his shoulder, the gun was tied to two stakes facing a sand bank and the trigger pulled with a long string. Much as I anticipated the shell burst in the gun just after it started on its flight. That settled the question of the length of the gun, the burst part being quite close to the end. The next question was what charge of powder to use to drive the shell into the whale. He had a barrel filled with earth in the garden at Albert Terrace, and taking the uncharged shell, fired it with 3¼ drams of powder from a distance of 20 yards. Father went head over heels, the gun in the air and the shell through the barrel, over the fence and through the roof of Clark's timber mill. . . . This will give some idea, cut off as we were from the old world, and American whaling centres, of the difficulties of producing the bomb lance. It was in use on his ships for some time.

A tragedy followed its use on the *Offley*. On September 24, 1866, she rose whales off the South-West Cape. Her voyage had until then been an excellent one. She had taken one whale off the South-West Cape, two from the west coast of New Zealand, five near Kangaroo Island, another on September 21, and as stated, three days later whales were again sighted. In the hurry of getting the boats away, as a lad named Sinclair was loading the bomb gun, the hammer slipped through his oily fingers and the charge passed across the poop into the body of Thomas Cracknell, second mate. Frantic efforts were made to pull out the shell in the short space (about one minute) before the fuse exploded it, but they were of no avail. Then came the second explosion, and Cracknell was carried down to his bunk, where he died a little over an hour later. He was quite sensible in the interval and forgave the grief-stricken Hugh Sinclair for his part in the happening. Some days later the body was got to Hobart, and this is the post-mortem report of Thomas Thornley Brooke, M.R.C.S.:

I found a wound over the R. Hip; the whole of the Left side of his abdomen had been blown away by some explosive substance; the viscera were torn from their attachments and protruded through the wound. In the abdomen there was portion of a projectile that had perforated the bone. It went through the Pelvis and entered the abdomen. It was impossible to remove the iron without sawing the bone . . . the elbow portion of the Bomb Lance was through the bone and a portion of the Gutta Percha feather-shaped end of the lance, adhered still to the end which had penetrated the Ilium and projected from the exterior part of the wound. About four inches of the lower part of the shell of the lance and the upper part of it was wanting, showing that it had exploded.

Dr. Brooke concluded:

The explosion of such an instrument, as the Bomb Lance produced, would cause such wounds as I saw, and almost necessarily cause instantaneous death, without the slightest possibility of recovery.

The most ambitious venture in which three of my grandfather's own vessels were concerned, and which was in great part in alliance with American whaling interests, is, I think, worthy of being told in some detail.

PART II.

The crew was a mixture from every land, and many
a tongue they spoke,
And when they sat in the fo'castle, enjoying an
evening smoke,
There were tales told, Youngster, would make you
stare . . . stories of countless shoals
Of devil fish in the Pacific and right whales away
at the Poles.

"The Amber Whale."

To the Kerguelens for Sea Elephant and Whale Oil.

Late in 1857 my grandfather read in a Melbourne paper that a seaman had been landed there, frostbitten, from a sealing party at Kerguelen Island. He had the sailor when sufficiently recovered brought to Hobart, and after hearing at first hand of conditions at the Kerguelens, decided to organize an expedition of his own. For this purpose he called in from the whaling grounds the *Offley* and *Elizabeth Jane*, two of his vessels, the former to take the oil, the *Elizabeth Jane* to act as tender. Their destination, the Kerguelen and Heard Islands, are situated in latitude 49° south, the most southerly of the roaring forties, almost midway between the Cape and Australia, and exposed to constant westerly gales and very low temperatures. The sea elephants were to be found in colonies on the open beaches at Heard Island, where the shore party was to kill them and take their blubber and raft it off by the tender to the big ship or by sea 300 miles to Kerguelen Island. The owner's plan was to send the *Elizabeth Jane* ahead, laden with frame huts, all necessary supplies and the beach party. These men were to land, erect the huts and set to work to obtain the oil, which would then be ready for shipment on the arrival six months later of the main party.

Captain Jacob, in the little schooner, left on July 6, 1858, and four months later bad news of her was brought from Mauritius by the trader *Acis*. It seems that she commenced to leak badly soon after leaving port, but had persisted in her voyage. She actually sighted Kerguelen Island, but in consequence of continued gales of wind and heavy weather the try works had to be thrown overboard. As she had been blown off the land and the crew had mutinied, the captain bore up for Mauritius with the vessel in a most shattered condition. After a survey she was condemned as unseaworthy, and repairs being prohibitive (the estimate was more than £1,500), was sold for a song. (For her new employer she spent long years in the cattle trade between Madagascar and Mauritius.) On hearing of this setback, the owner sent another of his schooners, the *Flying Squirrel*, by way of Cape Horn to avoid the westerlies on her way down; but more trouble with the crew ended by the ship's being taken to Valparaiso, and so the venture was still short of a tender.

The *Offley* meanwhile had left for the south, and here is the narrative of old Captain John Harrison, then an apprentice on board, as told to *Truth* and myself some seventy years after the events:

At the outset disaster nearly overtook us, we had hardly left the Tasmanian coast behind us when the cry of "There she blows" came from the look out. A school of whales had been sighted from the masthead. Three boats were quickly manned and lowered. They soon made fast to a large whale that set off at tremendous rate. The boats hung on till next morning, but at 1 a.m. it was decided to cut the whale lines and return to the *Offley* which had long been lost sight of.

This was done and the whale abandoned. After arduous toil the ship was reached, when Captain Robertson had almost given up any hope of his men's safety. The ship then sailed lazily along by way of the Indian Ocean, taking five months on the trip to the Kerguelens. There was no need for haste if the schooner ahead had fulfilled expectations. Harrison goes on:

Nearing Heards Island, in squally weather, as we looked we could see the coast line and intervening what was evidently a long reef. At the same time there broke upon our ears a continuous and mighty bellowing. It partook of the magnitude and volume of distant thunder and it came to us directly from leeward, rising above the crash of the surf and travelling directly in the teeth of the gale. As we passed the point, Fairchilds Beach burst on our view, a half moon of white sand upon which broke a huge surf and which was covered with myriads of Sea Elephants and Seals. It was from these that the great bellowing went up.

With five anchors down, we presently discovered that the *Offley* was not on her lonesome in the roaring forties, as several American Sealers were anchored in these stormy waters. They had come in quest of the intelligent and affectionate creatures that are hunted down with ruthless cruelty between land and sea to decorate a lady.

To continue Harrison's narrative:

The non arrival of our tender with tents and tools on board made it imperative for us to set about making shelters. Tents and huts were needed. Spare oars were used as roof beams, seal skins were used as roofs and tents made from sails and tarpaulins. Whilst so engaged we had ample opportunity to study the sea elephants or elephant seal. He was a prodigious beast, with a length of 20 to 22 feet and a girth of 15 to 16 feet, these dimensions relating to males only, the females being considerably smaller. The enormous coating of blubber by which the animal is enveloped is a perfect protection against cold, for we found that a body of a sea elephant that lay for twelve hours in the icy water, still retained its natural heat. From each male three to four barrels of oil could be taken. After our tents were erected and a snow blubber factory built the real work of the expedition was begun. A keen watch had to be kept as our American competitors were all out for business. Each gang consisted of three men, a killer who was provided with gun and lance, a skinner to cut off the blubber and a third man to carry the blubber to the depot. The actual killing was simple enough. With gun and lance the killer would touch the elephant's snout, which action invariably made the creature to open his mouth to bark. A shot was lodged in the roof of the mouth and the skinner got to work on the carcass. This slaughter went on for three months at Heards Island where we first anchored and the non arrival of our tender made it imperative for us to link up with an American Schooner the *Mary Powell* which was playing a lone hand.

Let us leave for a while the captain's narrative and hear the description of the crew of the conditions under which they spent these three months (remembering that a lawsuit against the owner was impending). An advertisement signed by several is as follows:

We were ordered on shore upon an island covered with ice and snow and with snow falling. At length we succeeded in finding some old portions of a wreck and managed to erect a place large enough for us to crawl into. We were fully two days in erecting these few poles and a sail over them where we had to exist for upwards of six months, huddled together far worse than sheep, our fireplace tussocks of grass and our fuel Elephant's blubber and penguin skins. We were each day aroused at 4 a.m., and after a breakfast of Salt Beef coffee and biscuits worked on the beach till 4 p.m., when we proceeded to our miserable abode to make our second and last meal for the day.

Three months after landing, this party of 18 were joined by 22 sailors from the *Mary Powell* with additional provisions. The food supply, however, became so low that they had to go in search of wild penguins, elephants' tongues and wild cabbage, the last-mentioned of which was obtained after digging five or six feet under the snow. Eventually with the return of the schooner conditions improved.

During the long wait between the sealing seasons, both the ships had done some whaling. The schooner cruised for black whales, bringing her catch to the *Offley* to be tried out. When the latter put to sea, Captain Harrison states that it was the practice of all the other crews in Three Island Harbour to go on board and help in the preparations for an early start. With five anchors to lift, sails to bend and spars to be sent aloft there was full need for some assistance.

With the opening of the second season's sealing, disaster followed the venture. The *Mary Powell*, after the 300 mile run between the two islands, was wrecked. During a terrific storm she parted her anchor chain and drifted side on to an iceberg or glacier face near Fairchild's Beach, abreast of where the hunters lay. Two American sealers on shore heard the men's cries above the din of

the storm, echoing down from a frowning wall of rock that backed the beach a hundred feet inshore. Taking the lashings from their tents, these two heroes lowered a rope down to the wreck and after a titanic struggle succeeded in hauling the first man up. One by one the remainder were saved, except for one poor fellow who was washed overboard when the schooner crashed against the berg. The version often told me by my father was that a young sailor actually jumped from the tip of the yard arm to the cliff face as the vessel rolled inshore. Taking a light lance warp, he climbed the face of the cliff. From the top he pulled up a rope and by its help the lightest member of the crew. The rescue of the remainder was then easy. So not only was another tender gone, but with her the season's take of oil. After mating with another Yankee schooner, the *Axford*, the *Offley* returned to Kerguelen's Land, where Mrs. Robinson, the captain's wife, gave birth to a son, called James Kerguelen, who was to die many years later of thirst when prospecting in Western Australia. Whilst the ships were lying idle at Three Island Harbour, a boat's crew was sent to collect penguin's eggs. Here is portion of the description by one of them. On September 20, 1859, an early morning start was made. To reach the rookery a boat's pull of 12 miles had to be covered, and then there was a stage over wet, snowy country. Very soon it came on to blow, snow and rain most fearfully—so much so that the boat had to be beached with everyone soaked to the skin. The men climbed over mountains of ice and snow before they found any eggs. After about 1,000 had been procured, the return journey was begun. The boat was reached safely, but when about six miles had been covered the wind shifted around, blowing a most terrific gale. With great difficulty the boat regained the shore after filling with water several times. In such circumstances it was eventually decided to travel across the mountains in search of a hut known to have been built by American sealers. Night came on and darkness added to their difficulties, and in the storm doubts began to arise as to whether they would be able to find the hut. It was decided, however, that the best course was to push on at all hazards, amid the frost and snow. In the darkness Williams the carpenter lay down and prepared to die, but his mates helped him until they could go no further, when they stopped for the night. At dawn four pushed on in search of the hut, two remaining with Williams. After the shelter was found a boat's sail was taken back to the carpenter, and with this cover he remained where he had stopped, until on the fifth day an American schooner, searching for the castaways, rescued both those on the beach and those at the hut. Treated by the Americans with every care and consideration, all were returned to the *Offley*. The narrative states that for some days before their rescue, they sucked the blood from the heads of albatross. All were more or less frostbitten, Williams so badly that both hands and some of his toes had to be amputated on the ship. The narrator adds: "This poor unfortunate may now be seen in this deplorable state at the Crown and Kettle, public house, where helpless and powerless for life, he remains to be seen, a warning and beacon to poor seamen against shipping on such voyages."

Eighteen months had now passed since the expedition had left Hobart Town, and the period for which the crew had signed their articles was completed. They stated that from this date the captain promised that they should be on a monthly wage instead of the usual lay or share of the takings of the voyage. It was this promise and the alleged shortcomings of food and supplies to them whilst they were at the island that were later responsible for a series of legal actions against the owner in the courts at Hobart Town. It is from the reports of these that the incidents of the voyage have been in part taken.

The *Offley* finally arrived home on Regatta Day of 1860, carrying only a few hundred barrels of oil representing a huge loss (£7,500 at least) to her owner, Mrs. Robinson with her baby son, and a live sea elephant the property of the unhappy Williams. This animal for a while at least was shown at the "Crown and Kettle", and brought to him, and no doubt to mine host, a lucrative return.

After the legal actions were concluded, that large portion of the crew who were of Melbourne origin and who had come over for a pleasant cruise, returned to the sister colony, and I have no doubt that the balance of Tasmanians within a few days had signed on once more and, the last cruise and its hardships forgotten, were again in pursuit of the whale.

Conclusion.

So I, too, come to an end of my description of this series of happenings of the now long past, when it was possible for a surgeon not only to undertake a very large practice, but even in some measure to guide and direct the fortunes of the community among whom he worked.

Addendum.

A recent mail from England brought me a rare volume, "Four Years Aboard the Whaleship", by Whitecar. In it is the following reference to the *Elizabeth Jane*, which came into Mauritius whilst the author's ship, the American whaler *Pacific*, was refitting there:

> And now, for the time being, we have done with American Whalers, and come to one sailing under the flag of England—the brig *Elizabeth and Jane*, of Hobart Town. She was fitted out as a tender for some larger vessel, and sent to Desolation for the capture of whales, sea elephants and seals, indiscriminately; she had a Yankee mate, and was intended by the Hobart Town merchants to be the pioneer of a fleet to compete with the Yankees in the procuring of oil, which trade has, for many years, been a prolific source of wealth to those engaged in it; the bleak shore of Kergulen's land being a favourite resort for those creatures so eagerly sought for by the whaleman. Scarcely had the Brig arrived at the scene of her anticipated operations than she commenced leaking so badly, that the crew were kept continually pumping, day and night; necessitating her being carried into port, and either being thoroughly repaired or condemned as unseaworthy.
>
> On bringing her into Mauritius the Captain preferred a complaint to the authorities against his men, charging them with mutiny and threatening his life. Before the authorities had time to act upon his information, about one half of the crew took one of the boats, went ashore, and got drunk. A fight followed as a matter of course, and in this condition they were easily captured by the police. Those who were left on board were brought ashore in irons; but they did not seem to mind the manacles, all of them being convicts, who, no doubt, had been accustomed to such bracelets before. After landing, they were conveyed to the jail, where their companions were already lodged. The following morning they were brought before the Magistrate, who, after hearing both sides of the case, dismissed the charge as unfounded and frivolous, at the same time adding some wholesome advice to the Master of the vessel for the future goverment of those under his command. A few days after the brig was condemned as unseaworthy.

This interesting comment is somewhat biased, and in regard to the convict "touch" very unfair to the simple but free sailormen of Hobart Town.

A NOTE ON THE IDENTIFICATION OF SKULLS BY X-RAY PICTURES OF THE FRONTAL SINUSES.

By ARTHUR SCHULLER, M.D.,
From the Anatomy Department of the University of Melbourne.

RADIOGRAPHY of the pneumatic cavities in the walls of the skull is not only an integral part of certain clinical examinations, but also an important aid to the study of the variations of these spaces, whether they are due to constitutional, hormonal or racial factors. Developmental changes of the cavities, which occur during the life of the individual, as well as retrogressive processes in old age, can also be studied. The most striking feature of the röntgenographic appearance of the pneumatic spaces is the individual variation of their size and configuration.

The frontal and sphenoidal sinuses as well as the mastoid cells vary considerably in X-ray pictures of different subjects. Even the two sides of the same skull are not symmetrical as a rule. I have previously demonstrated that X-ray pictures of the frontal sinuses in 100 cases show individual differences. From this investigation it was obvious that individual differences of the cavities may be used for the purpose of identification of skulls. In a paper published in Volume LV of the *Monatsschrift für Ohrenheilkunde und Laryngo-Rhinologie* in 1921, I suggested the use of skiagrams of the frontal sinuses for identification of skulls in medico-legal cases. W. L. Culbert and F. M. Law have had opportunities of proving the value of the method. In a paper on "Identification by Comparison of Roentgenograms", published in 1927 in *The Journal of the American Medical Association*, these authors tell the story of a citizen of New York who was killed on an expedition to Tibet, and whose skull was brought back to New York for medico-legal identification. This skull was identified by taking X-ray pictures of the pneumatic sinuses and mastoid cells, and then comparing them with skiagrams taken by the authors during the man's life eight years previously. Culbert and Law state that "if such roentgenograms had been taken of men going into war, there would have been far fewer bodies of unknown soldiers". The authors, quoting my previous paper on the same subject, continue: "The field of anthropometric roentgenography is obviously a very important one, both as a record of general identification and in criminal identification."

The development of the frontal sinuses and their appearance in adults have been described in all text-books of anatomy and in monographs by oto-rhinologists and röntgenologists. The frontal sinuses develop as extensions from the nasal cavities and are clearly indicated in the second year of life. They grow slowly until puberty and then increase rapidly in size. They continue to grow until the twentieth year. Absence of frontal sinuses in adults can be found in X-ray pictures in about 5% of all cases. Unilateral absence is observed in 1% of cases; absence is noted on the left side as often as on the right side. Persistence of the frontal (metopic) suture is often combined with absence of frontal sinuses. This suture can be well demonstrated on postero-anterior skiagrams; it is nearly always to be found between the supraorbital ridges, and may completely separate the halves of the bone. Persistence of the frontal suture seems to be more frequent in Europeans (8·7%) than in Mongols (5·1%), Malayans (5%), Negroes (1·2%) or Australian aborigines (1%). In the presence of a metopic suture the frontal sinuses, if they are developed, will be small, never passing over the mid-line from one side to the other side. The septum of the frontal sinuses in these cases consists of two plates and may be much thicker than usual. In female skulls the arcades of the scalloped upper border of the frontal sinuses are smaller and more numerous than in the male skull. Pneumatic cavities of the skulls of identical twins are similar, but they are not identical (see Figure I). In old people a thinning of the walls of the frontal sinuses is often present, together with an enlargement of these spaces compensating for the shrinkage of the frontal lobes of the brain. Occasionally a cavitation develops in the senile skull due to atrophy of the diploë, and it may extend up to the vertex and downwards communicate with the frontal sinuses. The symmetrical hyperostosis on the inner surface of the forehead often seen in female skulls, usually after the menopause, may produce changes in the size and shape of the frontal sinuses.

Constitutional and hormonal factors are well-known causes of hypopneumatization or hyperpneumatization. In cretinism or in *dysostosis cleidocranialis* pneumatization is very poor or absent, whereas in acromegaly the size of the pneumatic spaces is often enormous. Enlargement of the frontal sinuses is frequently observed in micrencephalic and pseudomicrencephalic skulls; this may be a compensation for the hypoplasia or atrophy of the brain on one or both sides.

Important changes in the radiographic appearance of the frontal sinuses occur as a consequence of acute or chronic inflammatory conditions (sinusitis), in that the density of the compact lamina, which outlines the cavity, decreases; rarely the outline becomes thicker (*perisinusitis ossificans*). Occasionally the cavity of the sinus disappears completely by new formation of bony tissue inside the cavity, analogous to a sclerosed mastoid. An enlargement and ballooning of the frontal sinus may be caused by obstruction of the fronto-nasal duct due to inflammatory processes, to injuries or to tumours. The resulting retention cyst contains mucus (mucocele) or pus (pyocele); a similar enlargement seems to be caused by retention of air due to a valve-like occlusion of the fronto-nasal duct (*pneumosinus dilatans*). Cholesteatomata of the frontal bone or the frontal sinus may cause a large expansion similar to mucocele. Destruction or deformation of the forehead by injuries or inflammatory conditions like tuberculosis or syphilis may alter the appearance of the frontal sinuses. Finally, abnormalities of the frontal sinuses are observed in Paget's *osteitis deformans*, in *osteofibrosis cystica*, in *leontiasis ossea*, in circumscribed hyperostosis, in osteoma or osteosarcoma of the frontal bone and in frontal cephalhæmatoma. Even endocranial tumours, specially meningiomata, may produce alteration of the air spaces by invading, by thinning or by thickening the walls of the sinus.

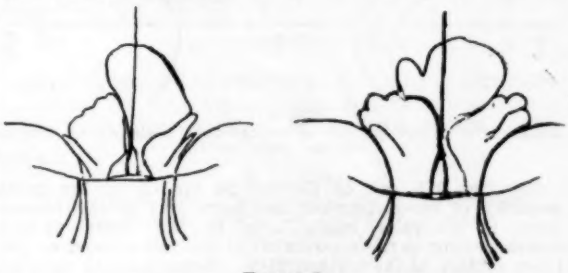

FIGURE I.
Frontal sinuses of adult male identical twins.

Summarizing the changes of the frontal sinuses caused by pathological processes, one can state that the size, shape and outline may be altered by inflammatory processes, tumours or injuries. The question whether in cases of diseased frontal sinuses other pneumatic cavities of the skull can be used for radiographic identification has been answered in the affirmative by Culbert and Law in their paper quoted earlier. The sphenoidal and the mastoid cells have more features peculiar to the individual than the ethmoids or maxillary sinuses. The extension of the sphenoidal cells is well visible in axial views taken vertically. Mastoid pneumatization is well shown in lateral oblique views.

I now submit a method and technique for the anthropometric description of the frontal sinuses in skiagrams taken in the standard "forehead-nose" position. The skull is attached to the film symmetrically with the forehead and the tip of the nose; the chief ray passes through the supraorbital margins, parallel to Reid's horizontal line, which connects the lower rim of the orbit with the upper border of the external auditory meatus.

Figure II, representing a diagram of the forehead-nose view, demonstrates the procedure of describing and measuring the skiagram for the purpose of anthropometric identification. The following are the bony details to be observed in the plate: the line of the frontal septum; the upper border of the frontal sinus; partial septa; supraorbital cells. In the skull shown in Figure II the line of the septum deviates from the mid-line towards the right side; the upper border is scalloped with two arcades on the right and three on the left frontal sinus; one partial septum is present (marked by an arrow) between the medial and the two lateral arcades of the left frontal sinus; two cells are seen in the lower half of the left frontal area, the lateral cell, marked by one cross, representing a supraorbital extension, the medial cell, marked by two crosses, representing a *bulla frontalis* of the ethmoid.

In order to measure the diameters of the frontal sinuses I use a simple construction—namely, a vertical line corresponding to the median sagittal section of the forehead (*MN*), a horizontal line (*IS*) corresponding to the projection of the *jugum* (*planum*) *sphenoidale*, one rectangle ($R + L$) framing the upper border and the two lateral borders of both combined frontal sinuses (*abdc*) and another rectangle (L) framing the larger sinus (*ebdf*).

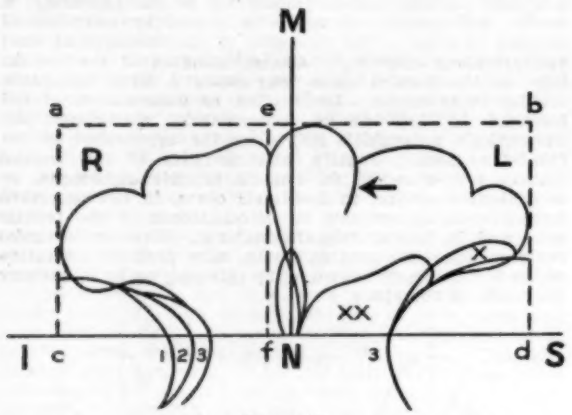

FIGURE II.
Diagram of X-ray picture (forehead-nose position) of frontal sinuses (see text).

The line *MN* can be determined readily in the great majority of cases, because the dense line of the frontal crest is generally easily seen in the X-ray picture corresponding to the attachment of the *falx cerebri* on the inner surface of the vertical plate. Sometimes the outlines of a narrow groove are visible; this is the anterior part of the longitudinal sinus. A persistent frontal suture may indicate the mid-line, or the rim of the *crista galli* facilitates its recognition. Finally, the position of characteristic shadows representing ossifications along the *falx cerebri* or calcifications of the pineal body may serve the same purpose.

The line *IS* is drawn perpendicularly to the mid-line. It represents the level of the *jugum* (*planum*) *sphenoidale*, which forms the roof of the body of the sphenoid bone on the floor of the anterior cranial fossa, just behind the *lamina cribrosa*. This line of the *jugum sphenoidale* lies in the same horizontal level as the bottom of the frontal sinus in the majority of cases, as it is seen in profile pictures of the anterior cranial fossa. In the standard forehead-nose view, the projection of the *jugum sphenoidale* is always visible as a straight or slightly curved outline, which crosses the projection of the medial border and/or the medial wall of the orbit (1, 2, 3 in Figure II). The line *IS*, joining these points perpendicular to *MN*, indicates the level of the floor of the frontal sinuses. The horizontal line *IS* forms the base for the construction of the rectangular frames of the two combined frontal sinuses ($R + L$) and the larger left sinus (L); a horizontal line is drawn through the highest point of the left frontal sinus, and three vertical lines are drawn, two along the most lateral points of the left and the right sinus, and one along the right border of the left sinus. The exact measurements are taken of the width (*ab*) of the rectangular frame for both combined sinuses, the width (*eb*) of the rectangle for the left sinus and the height (*ef*) of the rectangle for the left sinus. These three measurements, combined with the description of the frontal septa, of the arches of the upper border of the frontal sinuses and of the separate cells in the supraorbital region, should allow one to identify the frontal sinus of each individual skull. It is obvious that the three measurements are sufficient as fundamentals for the classification of large numbers of cases and may be used as the basis of a filing system for the X-ray pictures.

Summary.

This paper deals with a method of describing the configuration and of measuring the extension of the frontal sinuses in skiagrams of skulls taken in the standard forehead-nose position, for the purpose of anthropometric identification by comparison of the skiagrams of these skulls with X-ray pictures formerly taken.

The developmental variations and pathological changes which may be observed in frontal sinuses are briefly reviewed.

Acknowledgement.

I am indebted to Professor Sydney Sunderland for his help with the arrangement of this paper.

THE CAUSES OF BLINDNESS IN CHILDREN.

By J. C. HALLIDAY,
Honorary Ophthalmic Surgeon, New South Wales Institute for the Deaf and Dumb and the Blind, Darlington.

IN THE MEDICAL JOURNAL OF AUSTRALIA of October 23, 1920, I tabulated the causes of blindness in 71 children admitted to the New South Wales school for the deaf, dumb and blind during the years 1911 to 1920. In Table I are listed the causes of blindness, placed in order of incidence, in 118 children admitted to the school since 1920.

TABLE I.

Cause of Blindness.	Number of Cases.
Optic atrophy	30
Congenital cataract	17
Ophthalmia neonatorum	14
Congenital defects	14
Iridocyclitis	7
Glioma	5
Metastatic uveitis	5
Interstitial keratitis	3
Dislocated lens	3
Retinochoroiditis	3
Sympathetic ophthalmitis	2
Cerebral defect	2
Albinism	2
Syphilitic uveitis	2
Corneal nebulæ	2
Buphthalmos	2
Pituitary tumour	1
Coloboma of iris and chorioid	1
Aniridia	1
Traumatic iridocyclitis	1
High myopia	1
Total	118

The table published in 1920 was as follows (Table II):

TABLE II.

Cause of Blindness.	Number of Cases.
Ophthalmia neonatorum	17
Congenital defects (including cataract)	16
Optic atrophy	15
Syphilis	6
Sympathetic ophthalmitis	5
Trachoma	4
Glioma	3
Metastasis in fevers	3
Buphthalmos	1
Burns	1
Total	71

I confess to a difficulty in making an accurate diagnosis in many cases. Sometimes the eyes are absent altogether, and the ocular wrecks remaining as end-results often tell

a doubtful story. The history supplied by the parent is often untruthful and generally valueless, and the difficulties met with in obtaining a full history of each patient from the oculist previously in charge have not been overcome. The diagnosis is often not mine, but a bequest from a forerunner. These troubles would mostly vanish if we had compulsory notification of blindness.

It is encouraging to note fewer cases of *ophthalmia neonatorum*; but with prophylaxis and modern treatment they should be fewer still. One striking feature is the high place taken by congenital cataract. The prognosis after surgical treatment must be indeed bad. Is our technique at fault, or does the presence of other pathological conditions make a good visual result impossible? One is indeed struck with the high incidence of congenital defects generally. If to the 14 cases under this head are added 17 from congenital cataract, three from dislocated lens, two from albinism, two from buphthalmos and one from aniridia, the total is 39 or 33%. This is a matter that might well engage the attention of the eugenists. The large number of children blind from optic atrophy should make the physicians furiously to think; in many cases they are in charge while the damage is being done. Are they fully alive to the danger threatening the nerve, and are they sparing no endeavour to avert the tragedy?

Mr. Earlam informs me that the school has been requisitioned for military purposes. Seeing that this institution is carrying out the education of nearly all the blind children of the State, this action is deplorable in the highest degree. It is sincerely to be hoped that the Government will immediately provide an adequate alternative, so that these unfortunate children are not deprived of the benefit and solace of the education they so sorely need.

Reports of Cases.

DEEP X-RAY TREATMENT OF GAS GANGRENE: RECOVERY.

By A. M. DAVIDSON, O.B.E., M.B., Ch.M.,
Acting Assistant Surgeon, Royal Prince Alfred Hospital, Sydney.

Clinical Record.

SAPPER E.S. was admitted to the casualty department of the Royal Prince Alfred Hospital on February 2, 1943, at 11.25 p.m., having fallen between a moving train and the platform. His right leg had been cut off by the train about three inches below the knee; it was hanging by loose skin. In passing over the limb, the wheels had dragged the skin proximally, so that the fat layer had been torn through round the whole circumference of the thigh to a level about three inches below the perineum. The skin of the thigh and the fat adhering to it had been turned inside out, so that large quantities of dirt had gained access to the subcutaneous tissue and the fascial sheaths. From just above the knee the fascia and muscle were covered with dirt, but not grossly lacerated. Attempts to cleanse this contaminated area were limited to excision of the skin edges and fat and the liberal use of hydrogen peroxide. At first it appeared that disarticulation at the hip should be performed in order to remove such grossly infected tissue; but on second thoughts I decided to amputate the limb through the lower third of the femur.

Immediately after operation 10,000 units of tetanus antitoxin and 20,000 units of gas-gangrene antiserum were administered intramuscularly, and a tranfusion of one pint of blood was given. Forty-eight hours after operation symptoms and signs of gas-gangrene infection appeared; 30,000 units of gas-gangrene antiserum were given intravenously and the same dose was given intramuscularly. Sulphathiazole was administered orally. X-ray therapy was commenced. The pathologist examined a smear from the raw surface, and reported the following findings: direct examination of the smear revealed scanty polymorphonuclear cells, a moderate number of Gram-positive cocci and an occasional Gram-positive bacillus; aerobic culture produced a scanty growth of hæmolytic streptococci and an occasional hæmolytic *Staphylococcus aureus;* anaerobic culture resulted in a moderate growth of *Bacillus welchii*; attempts at culture from the blood, both aerobic and anaerobic, produced no growth of organisms after 144 hours.

At the instance of Dr. E. W. Frecker, the deep X-ray therapy was carried out in the following manner. The factors employed were 200 kilovolts and 20 milliamperes; the application was made to the thigh for two and a half minutes anteriorly and two and a half minutes posteriorly twice a day for five days, 75 *r* being delivered at each application. A total of 350 *r* was given to each surface.

The blood urea level was 37 milligrammes *per centum* on the fourth day, and the urinary output never diminished or caused concern. The blood picture varied; on the fourth day the erythrocytes numbered 2,820,000 per cubic millimetre and the hæmoglobin value was 47%; the blood condition steadily improved. In all, 100,000 units of gas-gangrene antiserum and 46·5 grammes of sulphathiazole were given.

Comment.

The main points of interest in this case are the following: (i) the short time between injury and operation, the patient being back in bed and receiving a blood transfusion within two hours; (ii) the relatively enormous area of subcutaneous contamination; (iii) the treatment by tetanus antitoxin, gas-gangrene antiserum, blood transfusion and sulphathiazole as general measures and the use of hydrogen peroxide and deep X-ray therapy locally. It should be noted that the patient was not addicted to the use of alcohol.

OBSERVATIONS ON THE TREATMENT OF CERTAIN TYPES OF FRACTURES AND DISLOCATIONS OF THE CERVICAL PART OF THE SPINE.

By E. F. WEST,
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DURING the summer of 1942 a number of patients suffering from injuries of the cervical portion of the spine were admitted to an Australian general hospital working in the Middle East. Many of these injuries were caused by men diving off each other's shoulders into shallow water at the beaches, or were sustained during surfing. In fact, so common were injuries of the neck through the former cause that a general order prohibiting the practice was promulgated. Other severe injuries were the result of motor-car accidents.

In the treatment of the less serious types of fractures and dislocations of the neck, a form of plaster support was used which proved effective, comfortable in a hot climate, and free from the production of neuroses which frequently arise with heavier types of plaster casts in these conditions.

The reports of the two following cases serve to illustrate these points.

Case I.

Private J, aged twenty-five years, was admitted to hospital on June 4, 1942. He had been injured on May 25 when the truck in which he was travelling fell over a bridge in Syria. On his admission to hospital he complained of considerable pain in the upper part of the neck on the right side, just below the occiput. Pronounced torticollis was present. His face was turned to the left and the right sterno-mastoid muscle was in spasm with some tilt of the head to the right side. The cervical portion of the spine was held rigid. Anæsthesia in the area of distribution of the greater occipital nerve was present. The articular facet of the atlas on the right side had ridden forward and lay in front of that of the axis. The articulation on the left side appeared to be in normal alignment. Thus some damage to the transverse ligament of the atlas must have occurred. On June 5, under anæsthesia produced by "Pentothal", reduction was easily performed by the following manœuvre. A head halter was fixed in position and gentle traction was applied horizontally with the head in the displaced position for four minutes. The head was then gently rotated into the neutral position and the cervical portion of the spine was brought into slight extension. A lateral skiagram was then taken, and this showed that complete reduction had been obtained. A plaster cast as illustrated (Figures I and II) was then applied, while the dorsal portion of the spine was supported by a narrow board, in the usual way.

It will be seen from the illustration that strips of plaster extended down over the temporal and malar regions on each side, to prevent rotation of the head. The opening in the front of the plaster made it cooler and added greatly to the comfort of the patient. The whole cast was quite light.

FIGURE I.
Case I: Anterior view of patient with cast applied. Note the lateral extensions which prevent rotation.

FIGURE II.
Case I: Lateral view of patient with cast applied.

Convalescence was uneventful. The plaster cast was comfortable and effectively prevented anything more than minimal rotation of the head. During the time the cast was worn the weather was hot, but the patient did not complain. The plaster cast was reapplied three weeks later with the patient sitting up, and was finally removed on July 20, six and a half weeks after reduction. Full movements were regained in a few days. He was discharged to the convalescent depot on July 25 and two weeks later returned to full duty.

He was again examined in December, 1942, having been through the recent operations in the Western Desert as an infantryman. He stated that he had had no inconvenience whatever, and his neck felt normal. Examination revealed a full range of movement and normal power in the muscles of his neck.

Case II.

Sergeant B, aged thirty-nine years, was admitted to hospital on June 17, 1942. He had injured his neck by diving into shallow water a few hours previously. On examination, the cervical portion of his spine was held rigid and his head was rotated slightly to the right. An attempt to correct this deformity gently caused pain to be referred to the lower part of his neck.

FIGURE III.
Case II: Anterior view of patient wearing cast.

FIGURE IV.
Case II: Lateral view of patient wearing cast. Note the hyperextension of the neck.

Under anæsthesia produced by "Pentothal", the cervical portion of the spine was brought into hyperextension, and a plaster cast was applied as shown in Figures III and IV.

This plaster cast was worn for seven and a half weeks and was still quite efficient when the time came for its removal. The patient then had fairly good movements of his neck, and after a further two and a half weeks' convalescence he returned to full duty. Reports received from him later indicated that he had no disability.

Discussion.

It would thus appear that heavy plaster casts of the full "Minerva" type are not necessary for satisfactory immobilization of the cervical portion of the spine in fractures and dislocations of the type reported here. Indeed, they have produced neuroses in some patients seen by the writer.

The type of plaster cast described here has also been used for osteoarthritis of the cervical portion of the spine, especially the type which follows traumatic lesions of the intervertebral disks. In these cases the support needs to be worn for about four months. In civilian practice a type of support similar in shape to this plaster cast, but made of celluloid, was evolved and used successfully by the writer in several cases. These celluloid supports were removable and could be taken off for washing *et cetera*. It is pointed out, however, that this type of plaster cast is not efficient for fracture dislocations of the cervical portion of the spine which are unstable after reduction.

Summary.

1. A series of cases of injury of the cervical portion of the spine, chiefly following accidents in the surf, were encountered in the summer of 1942.

2. Two cases are reported in detail to illustrate their management.

3. A light modified "Minerva" type of plaster cast is described.

4. A short period of immobilization, and the avoidance of heavy types of plaster casts in these cases, are advocated to lessen the incidence of neuroses.

Acknowledgements.

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Reviews.

ABDOMINAL SURGERY.

"ABDOMINAL OPERATIONS", by Rodney Maingot, takes two volumes and constitutes a welcome addition to the library of practising surgeons.[1]

In Volume I the author in discussing closure of a paramedian incision in the epigastrium states: "The posterior sheath of the rectus must be caught up with the peritoneum" and refers to the transversalis fascia, whereas in this region it is actually the aponeurosis of the transversalis muscle or even the muscle itself which is divided and should be sutured independently of the peritoneum in order to secure actual reconstruction of anatomical continuity and thus prevent epigastric bulging.

It is pleasing to see Moynihan's dictum quoted: "Surgery has been made safe for the patient; we must now make the patient safe for surgery"—and to have this principle laid down as a necessity in abdominal surgery.

In discussing the treatment of chronic duodenal ulcer, the author roundly condemns certain *régimes* which have no scientific basis to recommend them, but are often used because of their simplicity and plausibility. He also points out that medical treatment is often doomed to failure through being too cursory, too casual or not sufficiently prolonged. Operation should be embarked upon only after careful deliberation and with due discrimination.

The chapter on treatment of chronic duodenal ulcer, along with the discussion as to the type of operation best suited

[1] "Abdominal Operations", by R. Maingot, F.R.C.S.; two volumes; 1940. New York: D. Appleton-Century Company Incorporated; Sydney: Angus and Robertson Limited. Super royal 8vo, pp. 813 (Volume I) and pp. 578 (Volume II), with illustrations. Price: 90s. net.

to the case, and the operative details that are well illustrated, shows a complete mastery of this difficult subject and makes very interesting reading. The author condemns Devine's operation of gastric exclusion in the treatment of duodenal ulcer and states that it should never be practised, an opinion which many other surgeons share. The indications for surgery in hæmorrhaging ulcer are put clearly, and apparently the author lays great stress on Gordon Taylor's teachings, which are quoted freely. He is an advocate of the three layer method of anastomosis. Although the differential diagnosis of acute perforation of a peptic ulcer is well tabulated, only three conditions are briefly discussed, namely, acute appendicitis, acute hæmorrhagic pancreatitis, and coronary thrombosis. A more detailed account of the other conditions would have been very helpful.

The question of chronic duodenal ileus is dismissed in a few pages, and this relatively common condition is deserving of more consideration, especially as regards its minor forms and symptomatology.

The Depage Janeway operation for gastrostomy seems to be the author's favourite operation for obstructing carcinoma of the stomach, but he speaks favourably of Devine's exclusion operation for such cases.

Post-operative complications of gastric surgery are fully discussed and this section is very helpful, especially the part on jejunal ulcer.

In the account of the operation of splenectomy the importance of delivering the superior pole through the incision is not made clear, although reference is made to the steps necessary to render it mobile. The author refers to pouring a pint or two of warm saline or Hartmann's solution into the abdomen before the incision is closed, but does not mention the value of blood transfusion coincident with the operation. The disappointing results in splenectomy for splenic anæmia are referred to; they are in marked contrast to those for essential thrombocytopenic *purpura hæmorrhagica* and acholuric jaundice, all conditions being discussed in detail. A short chapter by L. T. Bond on sternal puncture in the diagnosis of diseases of the spleen rounds off this section very nicely.

Diseases of the pancreas are dealt with in a rather abbreviated fashion, and it is surprising to see that the author considers cholecystogastrostomy for malignant diseases of the pancreas has an operative mortality of 50%.

It is noticeable that in the section dealing with diseases of the gall-bladder the opening chapter is concerned with anomalies and injuries, and the major part is devoted to stricture of the common bile duct and methods of dealing with this difficult condition. If the surgical tiro would only read this chapter he would perhaps realize that cholecystectomy is not an operation to be undertaken lightly. The chapter on carcinoma of the gall-bladder is enriched with several magnificent plates in colour taken from *The British Journal of Surgery*. The vexed question of immediate operation or expectant treatment in acute cholecystitis is discussed from both points of view and is well summarized, but the author's practice is to operate if the patient is seen within the first forty-eight hours after onset and if his general condition permits; after that time he is guided by the progress of the case.

The various operations on the gall-bladder are described and indications are given for their selection. Max Thorek's electro-surgical obliteration technique is described in detail. When drainage is carried out the author apparently brings the tube or tubes through the incision, and no mention is made of drainage through the loin by a stab incision. No discussion of the hepato-renal syndrome is made, but the reader is merely referred to the article by Gordon Heyd.

In Volume II pyogenic abscess of the liver is dealt with in a very sketchy fashion and could well be amplified. The treatment of appendicitis in its various forms follows along standard lines, as does the subject of subphrenic abscess.

For the radical cure of simple oblique inguinal hernia a relatively extensive operation is advised, as also is that for hernia in infants, and no consideration is given to Hamilton Russell's teaching. It is surprising to find that such patients are kept in bed for three weeks. The "standard operation" described is not quite in accord with modern practice. Where partial reconstruction of the posterior wall of the inguinal canal is necessary Ogilvie's teachings are quoted *in extenso*, but for complete reconstruction the author mentions Bassini, Wyllys Andrews, Halstead's rectus sheath flap and Bloodgood's operations, although he decries the last-mentioned. For direct hernia only Gallies and the floss silk lattice operations are mentioned. The question of femoral hernia is left very open, and would be better if revised. For the subumbilical incisional hernia only Nuttall's operation is considered. The discussion on the treatment and complication of strangulated hernia is the best part of this section.

There is a useful chapter on traumatic lesions of the intestines in which diagnosis and treatment are summarized very clearly. The description of regional enteritis should serve as a good reminder to those who may be apt to overlook this condition in the differential diagnosis of doubtful abdominal conditions.

Intestinal obstruction is dealt with in a very complete manner, but some detail as to Wagenstein's siphonage and the management of the duodenal or Miller Abbott tube would have added to its value for those inexperienced in these methods.

Diverticulitis is discussed in a clear fashion, but rather briefly in view of the importance of this condition.

The chapter on cancer of the colon is one of the best chapters and is enhanced by some beautiful plates in colour and by many first-class illustrations. Devine's method of defunctioning the colon is given prominence and all procedures are made very clear to the reader.

As one might expect, the chapter on cancer of the rectum is of a similar high standard to that on cancer of the colon and is also profusely and well illustrated. The final chapter dealing with post-operative chest complications should not be overlooked, as such complications are still relatively frequent and often a greater source of worry than the primary complaint.

The two volumes provide an example of the highest art of the printer. The type is excellent and the reproductions of all illustrations are first class. There are numerous typographical errors which should have been corrected by the proof-reader.

BLOOD SUBSTITUTES AND BLOOD TRANSFUSION.

A BOOK entitled "Blood Substitutes and Blood Transfusion"[1] is a symposium based on papers and discussions at the annual meeting of the American Serum Association held in Cleveland in June, 1941, and brought up to date (June, 1942) in the final chapter by a general summary.

The first section describes experimental work on the ætiology and mechanism of shock. The problem of mechanism of reduction of blood volume in traumatic shock was investigated by Cullen and his associates. Shock was produced in 9 out of 11 dogs by repeated blows to the hind limbs by a rubber mallet. It was found that sufficient quantities of blood and plasma were lost into the traumatized areas to account for the reduction in blood volume. But when the experiment was repeated with the limbs bandaged to diminish local fluid loss, shock was still produced in 14 out of 16 dogs. In the first experiment, hæmoconcentration was not of significance, whereas in the second experiment hæmoconcentration was consistently observed. In both experiments the first evidence of oncoming shock was reduction in the peripheral blood flow. The authors conclude that whereas the mechanism of reduced circulating volume is obscure, the therapeutic indications are clear: the restoration of blood and plasma volumes are first requisites to maintain an adequate circulation.

Studies by Solandt and Best indicated that fluid loss at the site of injury was not sufficient to produce death in shock. They investigated the possibility of an unknown factor being a toxic substance, but their experiments were inconclusive. They found that increase of serum potassium occurred as a terminal event and could not cause shock, and in joint experiments with Freeman they found that typical shock could be produced in sympathectomized animals, thus excluding the autonomic nervous system as the real cause of traumatic shock.

Blalock and Mason presented the results of experiments on the effect of heat and cold in the treatment of shock. They state that in dogs subjected to shock by hæmorrhage and trauma, elevation of temperature decreases the chance of survival and shortens the survival time, while the application of cold does not increase the chance of survival but lengthens the survival time. In studies upon the survival of rats in dehydration shock, results indicate that the chilled animal will consistently survive a dose of sucrose which is uniformly fatal to the warmed animal and to the control. It is pointed out that these experiments do not support the custom of vigorously warming the patient in shock.

[1] "Blood Substitutes and Blood Transfusion", edited by Stuart Mudd, M.A., M.D., and William Thalhimer, M.D.; 1942. Springfield, Illinois: Charles C. Thomas; London: Baillière, Tindall and Cox. 9¼" x 6", pp. 421, with illustrations. Price: $5.

Virgil Moon in a paper on the vascular and cellular dynamics of shock, emphasizes the abnormal permeability of the capillaries with loss of intravascular fluid and hæmoconcentration leading to circulatory failure.

Section II describes methods of preservation of plasma and serum by desiccation and by freezing. Four methods are discussed: (*a*) storage in the liquid state, (*b*) simple desiccation, (*c*) vacuum desiccation from the frozen state and (*d*) preservation in the frozen state.

Prolonged storage in the liquid state is said to have serious limitations: firstly, that the various entities involved in clotting and immune mechanisms undergo progressive deterioration, and secondly, that should any break in sterile technique occur, bacteria may survive, despite refrigeration and the presence of chemical preservatives. If stored plasma is to be injected intravenously it must be filtered. One fatal case is described in which unfiltered plasma caused asphyxial death in 20 to 25 minutes due to extensive pulmonary embolism.

In Section III, the use of hæmoglobin, serum albumin and casein digest as blood substitutes receives attention. Hæmoglobin can exert osmotic pressure four times that of plasma protein, but there is the risk of renal damage and reactions occurred in patients receiving doses above 0·64 gramme per kilogram of body weight. The properties of serum albumin adapt it for the osmotic control of water and electrolyte balance in the body. By special methods it may be purified and prepared in a crystalline form and progress is being made in the use of human serum albumin for the treatment of shock. Experimental work in dogs with casein digests is reported by Whipple and associates and their use in the treatment of prolonged hypoproteinæmia in human beings is suggested.

In Section IV, there are papers on the use of blood substitutes in the armed forces and one chapter is devoted to bacteriological control. There is included a paper by Levine and associates on the antigenicity of the Rh blood factor. Other chapters on neutralization of isoagglutinins and the use of the globulin fraction of A and B agglutinating serums for blood typing indicate advances of practical importance.

To all interested in shock and the use of blood substitutes, this book is to be recommended, but the title is misleading in that the transfusion of whole blood receives scant attention. It is significant that the opening sentence of Scudder's paper on electrophoretic patterns of serum and plasma is: "It is generally admitted that as soon as blood leaves the vascular system, it starts to degenerate." This fact requires emphasis at the present time. In cases of anæmia, including shock associated with hæmorrhage, the direct transfusion of whole blood has a more immediate and a more lasting beneficial effect on the patient than the drip infusion of bank blood or blood substitutes.

PROGRESS IN OBSTETRICS AND GYNÆCOLOGY.

THE editors of "Recent Advances in Obstetrics and Gynæcology" are to be warmly congratulated on producing a new edition during the war.[1]

In spite of the interruption to research in certain branches of medicine, a considerable amount of fresh matter has been added to this edition. The authors have done good work in sifting the wheat from the chaff in their useful digest on the most important researches published in the journals.

In the obstetrical section, the chapter on Cæsarean section describing various operations has been wisely cut out and two chapters more in keeping with a book of this kind have been added—one on post-natal care and the other a valuable contribution on radiology in obstetrics by Rohan Williams.

In the gynæcological section, prolapse operations have been omitted and two chapters on radiological investigations and X-ray therapy added.

The first chapter on ante-natal care has been considerably extended, particularly in regard to diet requirements in pregnancy and lactation. The especial importance of nutrition during pregnancy, to both mother and baby, is known to the medical profession, but general practitioners not especially interested in obstetrics are not insistent that patients do take a suitable diet. The further development of preventive medicine in obstetrics is shown in the new chapter on post-natal care. Recognition of the value of post-natal examination and of care in the recovery and maintenance of women's health after the puerperium, is still not appreciated in general practice, and post-natal work is still a relatively neglected field of preventive medicine.

There is little change in the chapters on breech delivery, pyelitis, anæsthesia and analgesia. In the last-mentioned sacral anæsthesia, as advocated by Poole and others, is strongly condemned. The authors' preference for chloroform and ether induction in Cæsarean section will not be generally endorsed in Australia, but all will agree with the stress they lay on the importance of the surgeon's being ready to make his incision when the induction is begun in order to minimize the effect of the anæsthetic on the baby. The excellent chapter on puerperal sepsis has some additions, notably a fuller account of chemotherapy and its mode of action, with, of course, reference to later variants of sulphanilamide which are now in use. The chapter on sex hormones has been largely rewritten with additional sections on male hormone testosterone and indications for its use, and the dangers of hormone therapy, while mention is made of the possible relation of endocrines to vitamin metabolism. This is a very useful summary. In the main, only those conditions for which the success of hormone treatment has become established by real clinical observation have been given.

The section on radiology in obstetrics is the best short review of the subject we have seen. There seems to be no doubt that there would be a wider use of X-ray examination in clinically selected cases if the facts set out here were generally appreciated, although, as the author notes, the economic factor is a great deterrent. The same author is responsible for the sections on X-ray diagnosis and therapy in gynæcology. A very useful description of uterosalpingography is included. On the other hand, this high standard does not seem to be maintained in the therapeutic section. Of the various methods that have been devised to determine the placental site in suspected cases of *placenta prævia*, Ude and Urner's experiments on cystography are stated to have withstood critical tests of other workers, and their method may be advocated. Insufficient emphasis is given to the modern accurately centred multiple small area ports in the treatment by deep therapy of carcinoma of the cervix, as opposed to the old massive irradiation of the whole pelvis. It is also disturbing to read of X-ray therapy (through one port) to the inguinal region after dissection of the glands for carcinoma of the vulva. Intrauterine radium treatment for uterine hæmorrhage without demonstrable pathological change, contains no reference to the type of applicator used and leaves the impression that the Cuscaden type of radon tube, which almost completely obviates late radio-necrosis (the so-called infected uterus after radium), has not come to the author's notice. Wilfred Shaw's chapter on ovarian tumours is retained, and particularly useful to the general practitioner is the article on leucorrhœa to which some new matter has been added. The final chapter on physiotherapy, while perhaps unduly optimistic, gives full details of the technique and dosage of ultra-short-wave therapy in the treatment of acute and subacute inflammatory conditions. The advantage of this over diathermy, which is not effective on deep-seated organs or on parametric tissues, is shown.

A minor criticism is the omission of any reference to the value of vitamin *K* injected during difficult labour. It is probable that it reduces cerebral hæmorrhage in the newborn, and is a prophylactic against *melena neonatorum*. The value of cord injection of hot saline solution in the third stage of labour to control post-partum hæmorrhage might also have been mentioned. An extensive bibliography is added to each chapter.

The high standard of earlier editions has been maintained, and with its new contributions, this book will be extremely useful to specialists and general practitioners.

[1] "Recent Advances in Obstetrics and Gynæcology", by A. W. Bourne, M.A., M.B., B.Ch. (Cambridge), F.R.C.S. (England), F.R.C.O.G., and L. H. Williams, M.D., M.S. (London), F.R.C.S. (England), F.R.C.O.G.; Fifth Edition; 1942. London: J. and A. Churchill Limited. 8" x 5¼", pp. 372, with illustrations. Price: 15s.

A TEXT-BOOK OF BACTERIOLOGY.

THE fourth edition of Fairbrother's "Text-Book of Bacteriology", which has appeared five years after publication of the first, will receive a warm welcome from readers of the previous editions.[1] The addition of a chapter on chemotherapy and revision of certain sections including those on cerebro-spinal meningitis, viruses and rickettsiæ have not increased the size of the book, which again appears printed in excellent type on good paper. This text-book has been described as the best of its kind and its continued popularity justifies this description.

[1] "A Text-Book of Bacteriology", by R. W. Fairbrother, D.Sc., M.D., F.R.C.P.; Fourth Edition; 1942. London: William Heinemann (Medical Books) Limited. 9¼" x 6", pp. 473, with illustrations. Price: 17s. 6d. net.

The Medical Journal of Australia

SATURDAY, JUNE 19, 1943.

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REHABILITATION AFTER THE WAR.

IN the war of 1914-1918, the problems of rehabilitation arose in Australia as soon as the first member of the Australian Imperial Force returned from active service had to be boarded out of the army. Its full complexity was manifest when demobilization began after the signing of the armistice in November, 1918. Rehabilitation from the present war is already demanding attention, and it seems justifiable to conclude that on this occasion it will present larger difficulties than it did after the earlier war. The term "rehabilitation" is sometimes used without thought of its meaning, and although most people have a general idea of its significance, opinions differ regarding the scope of what should be done in its name. Among the meanings of the word to "rehabilitate" the Oxford Dictionary gives "to replace in a previous state", "to restore to a previous condition", "to set up in a proper condition". To some persons, the rehabilitation of a sailor, soldier or airman who, before the war, was not a member of the fighting services, will mean his replacement in the occupation or calling that he followed before he enlisted. But the matter is not so simple as this, nor is it entirely confined to members of the fighting forces. To take the second of these points first—many persons are forsaking certain occupations or are being compelled to leave them in order that they may engage in activities outside the ranks of the fighting forces that have a direct bearing on the war. When the war is over, some of these activities will no longer be necessary, and the scope of others will be largely curtailed. None can doubt that the secret of reconstruction of the Australian community, and indeed of any other community after this war, will lie in the provision of suitable work for its members. In regard to the replacement of a member of the fighting forces in his pre-war calling, it is at once clear that some men enlisted at such an early age that they had no set trade or occupation in which they can be replaced. Others again, and they must be very numerous, will find that active service life has completely estranged them from their earlier occupations. This estrangement will possibly be due to an acquired liking for outdoor life in which muscular action takes an unusually prominent part, or it may be the result of mental development along avenues previously unexplored. A young man whose body or whose mind has developed during active service in an entirely new way, will be like a square peg in a round hole, if he is merely given an opportunity of working after the war in the job that he carried out before he enlisted. We have stated that in the provision of suitable work lies the secret of post-war reconstruction. Work will not be suitable unless it is chosen according to the aptitude and the wishes of the individual. This is a subject in which the medical profession has or should have a double interest. The profession is naturally concerned in the future welfare of its own members who have joined the medical branches of the three services, and from its special knowledge it can make a contribution to the rehabilitation problems of non-medical persons.

The rehabilitation of medical officers from the three medical services of the armed forces was discussed at the last meeting of the Federal Council of the British Medical Association in Australia. The subject was introduced by Sir Henry Newland, the President, who pointed out that the Central and State Coordination Committees had at their disposal a great deal of information that would be of the greatest possible use in the rehabilitation of medical officers, but that as they were at present constituted, they could not deal with the subject. It was thought that if the life of the coordination committees could be extended and the scope of their activities widened they might with certain additions to their personnel undertake the work. The excellent suggestion was adopted that the medical coordination committees should form a basis of the necessary committees and that to them should be added representative medical men of the armed forces and of civilian medical services who were not over forty-five years of age. If such committees were to be entrusted with the whole of the rehabilitation of medical officers of the armed forces it would be advisable that in each State one member of the committee should be chosen who had some active connexion with the medical post-graduate organization of the State. In all probability such a committee would work in active relationship with the Australian Services Education Council, to which reference will be made later. Education is, of course, only one of the aspects that would have to be considered by any organized body dealing with the rehabilitation of medical personnel. The placing of medical officers in hospitals and the problem of finding openings in practice could well be dealt with by a body such as the Federal Council envisages. It is to be hoped that the matter will not be allowed to rest where it is.

Those in regard to whom rehabilitation measures generally will have to be taken may be divided into two groups—those who have become casualties in the service of the country, and those whose health and vigour at the cessation of hostilities are unimpaired. At the outset we would insist that, although every legitimate and reasonable assistance in the matter of pensions and other grants-in-aid must be given to those entitled to receive them, the essence of rehabilitation lies not in pensions and not in monetary or other aid, but in so directing or leading a man that he will stand upon his own legs, that he will be the "master of his fate", that he will create his circumstances and not be controlled by them. It is clear that no man

will be able to take his proper place in a post-war society until he has recovered from any disability caused by war or until his recovery has reached a stage beyond which it is not likely to go. The medical profession has the responsibility of speeding that recovery. It is a responsibility not to be lightly taken. The medical services of navy, army and air force will, none can doubt, do all that lies in their power for the persons who pass through their hands, and eventually some of these persons will come under the care of the Repatriation Department. Those in the auxiliary services on what has been called the home front will receive treatment from the medical officers of the several government departments concerned and eventually a number of them will, it seems likely, pass into the care of civilian medical practitioners. In the opinion of many an organization should be set up to deal with these persons, and we understand that at least one of the Branches of the British Medical Association has already given serious consideration to a scheme for such an organization. The condition of the patient after treatment of this kind will depend on the wisdom with which it has been given; it will also depend on whether he has been cajoled or cosseted by vote-seeking politicians. A returned soldier about to be demobilized, whether he is recovering from a disability or not, needs as much as anything an increase in morale, and one of the most effective means of destroying morale is the political *placebo*. And treatment of the war injured and war weary should not differ from that meted out to persons disabled by any other means. Emphasis must be laid, not on the disablement as such—its cause or its effect—nor even on the degree of disability likely to remain, but on progress towards returning health, on pride in each fresh achievement. Unless this is done, the patient will never learn to stand on his own feet. At this point it is well to recall the ease with which neuroses may be created among soldiers; this was discussed in this journal recently by Professor John Bostock in the course of an article on returned soldier organizations. The importance of the psychiatric aspect calls for particular emphasis when we remember that 50% of the problems of returned soldiers have been estimated to have a psychological basis. It is not only those recovering from injury or sickness who have problems to face, and in addition to the magnitude of the task, this is one of the reasons why rehabilitation after this war is certain to be difficult. This part of the problem will be tackled in much the same way as it was tackled after the war of 1914-1918. In THE MEDICAL JOURNAL OF AUSTRALIA of August 15, 1942, reference was made in a discussion on medical officers of the services and their study to the education scheme devised for Australian soldiers after the last war and to its expansion by Mr. W. M. Hughes, who was then Prime Minister, to include "non-military employment". It was also pointed out that an Army Education Service had already been started in connexion with the present war. The service is run by the Australian Services Education Council by a full-time staff under the control of Lieutenant-Colonel R. B. Madgwick. One of the aims of this service will eventually be "so to give vocational guidance and training to troops that repatriation will be effected with the greatest ease and efficiency". With the cessation of hostilities and impending demobilization this service will need considerable expansion, if indeed its make-up will not in some measure have to be recast. In this regard two requirements should be borne in mind. The first is that in view of the psychological basis of many of the problems of soldiers (the term is used to include members of all the forces) a medical man who is a trained psychiatrist of wide experience should be impressed to the staff of the service that special cases may be referred to him. The second requirement is that only men of proven ability should be chosen for the staff. With this short reference to those who are faced by psychological difficulties, the main problem must again be stated—the problem of finding work for the enormous numbers who will need employment. Obviously this is not a subject which can be discussed in detail on the present occasion. It may be stated, however, that the provision of work after this war will call for the combined wisdom and judgement of the best brains in the nation, working for the good of the whole nation, possibly in collaboration, and certainly in harmony, with those of other nations. Men talk and hope, and some of them work, for a "new order" in which shall dwell equity and honour, fair dealing and righteousness. Such a new order will arise by a kind of planned evolution. This will be brought nearer if every man is given the kind of work for which he is suited. Some of those to be rehabilitated will need some kind of vocational training, but even here the indications will need to be clear—special training should not be given to an unsuitable person. The process will be something like a new birth—it will not be without pain. Some will suffer that others may gain, but Australians will have a chance to show of what stuff they are made.

Current Comment.

THE CONDUCTING SYSTEM OF THE HEART.

THE frog, the mouse and the canary have hearts of about the same size, but their pulses beat at very different rates, about 30, 700 and 1,000 times a minute respectively. The wave of excitation has therefore to be propagated throughout the heart more rapidly in the mouse than in the frog and more rapidly still in the canary. Hence one might expect the special conductile tissue of the heart to be more highly developed and extensively distributed in the canary than in the frog, with that of the mouse in an intermediate position. It has been held, however, by comparative anatomists who have investigated, that the sinu-atrial and atrio-ventricular nodes and the atrio-ventricular bundle of the mammal are the remnants of more extensive tissues of similar structure in lower vertebrates. Keith and McKenzie have described in the hearts of fishes a ring of "nodal tissue" at the junction of the *sinus venosus* and atrium and a similar ring at the junction of atrium and ventricle; to these nodal rings are attributed a greater rhythmicity and a slower rate of conduction of the wave of excitation than the ordinary cardiac muscle; hence they delay the passage of the wave from one cardiac chamber to the next so that the chamber receiving blood may be completely filled before it in turn begins to contract. The same authors maintain that as one ascends the scale of animals this nodal tissue becomes gradually concentrated and reduced: in amphibia the process has begun, in reptiles it is more obvious, until in mammals the rings are represented by the two nodes and the bundle.

In his Hunterian lecture of last year, Professor F. Davies, of Sheffield, has thrown doubt upon this interpretation of the phylogenetic origin of the conduction tissue of the mammalian (and avian) heart.[1] He has made a

[1] *British Heart Journal*, July, 1942.

detailed examination of the heart of the spotted salamander, a caudate amphibian, and has found in it no specialized muscle (nodal tissue or Purkinje fibres) in any part, either in the walls of the chambers or at the sites of junction of the chambers—the cardiac muscle has the same histological structure throughout. There are morphological rings at the junctions of the chambers, but they are composed of ordinary cardiac muscle; in them the arrangement of the anastomosis of fibres with one another is such as to account for the delay in the passage of the wave from one chamber to the next without postulating the existence of special junctional nodal tissue. Davies has failed also to find nodal tissue or Purkinje fibres in any part of the hearts of several varieties of fishes, amphibia and reptiles. On the other hand he has demonstrated that the specialized conducting muscle in the bird's heart is more widely distributed than in the mammalian heart, although Keith, Ivy McKenzie and others had denied the existence of a specialized bundle and nodes together. It is concluded that the specialized cardiac conducting system of the birds and mammals is a neomorphic development associated with the more rapid rate of their hearts (in relation to their size). A study of the ontogeny of the conducting tissues in the heart of the calf embryo, in which they are seen to appear and grow like any other embryonic organ and are not remnants of more extensive tissues present in earlier embryonic life, supports this conclusion.

Sir Arthur Keith has contributed a commentary on Davies's work[1] in which he expresses lack of conviction that the muscular connecting system of the mammalian and avian heart is a new formation. Such a sudden appearance, he states, would be an example of emergent evolution, which like other miraculous happenings is made credible only by blanks in our knowledge. He thinks the atrio-ventricular bundle may develop as it does in the calf embryo and still be but a modification of the atrio-ventricular function of the cold-blooded heart.

An interesting part of Sir Arthur Keith's contribution is a memoir of his summer-holiday researches with Martin Flack, then just down from Oxford, which led to the discovery of the sinu-atrial node. They had a cottage in Kent, and in the countryside round about they trapped all sorts of little animals for their hearts. One day Keith and his wife went out on their bicycles, leaving Flack in the cottage at the microtome cutting serial sections of a mole's heart: when they came home he was able to demonstrate a structure which he had found at the junction of the superior *vena cava* with the right atrium; it was analogous to the atrio-ventricular node, then recently described by Tawara, and they inferred that it must be the pacemaker of the heart. But their methods were such that they could have no conception of its real extent. Indeed, it is hardly surprising that such *al fresco* histology should fail to yield up all the secrets of the heart's structure which have now been uncovered by the more elaborate methods of Davies and others, or that there were errors and oversights in their work. But their discovery gives an encouraging indication of the rewards which may be in store even in modern times for those who engage in research for the mere joy of it.

[1] *Ibidem.*

THE PREVENTION OF LIVER DAMAGE.

MUCH has been written during the past few years on liver damage and its detection and estimation by liver function tests. Thus the importance of liver failure is realized in diseases such as thyreotoxicosis and cholelithiasis, and various measures intended to improve the function of the liver have been proposed. The chief of these has been the administration of a diet rich in carbohydrate. While the value of a high carbohydrate intake remains unchallenged as a factor in protecting the liver from damage by toxic agents, the statement that "cellular repair of the liver is best facilitated by a high carbohydrate diet" cannot be substantiated. As I. S. Radvin *et alii*[1] point out, in addition to carbohydrate, protein must be available for cellular repair; if the diet were limited to carbohydrates, repair would be dependent on the breakdown of endogenous protein, a very undesirable state of affairs. For this reason these authors recommend a diet of at least 3,000 Calories per day and containing 74% carbohydrate, 20% protein, and not more than 6% fat for those patients in whom liver damage has developed or who are likely to develop liver damage. Although an improvement was attained, their results do not allow of a statistical analysis. However, from a chemical investigation of portions of the liver removed at biopsy from patients operated on for biliary tract disease, Radvin and his associates concluded that this dietary regimen was effective in restoring liver glycogen and liver lipoid concentrations of patients with severe microscopic liver damage to the values found in patients with simple cholecystitic disease, and therefore it would appear to be efficacious. There is a tendency after operation to limit the patient's diet at first to carbohydrates for the reason that these substances are more easily digestible, yet such patients will have some degree of liver damage owing to the anæsthetic. In view of Radvin's work it would be advisable in these circumstances to include some easily digestible protein in the diet.

[1] *The Journal of the American Medical Association*, January 30, 1943.

VITAMIN C THERAPY IN CANCRUM ORIS.

THE acute and lethal condition known as *cancrum oris* is generally described as an infective gangrenous stomatitis that occurs most often in young children living in squalid surroundings in the slums of large cities. Affected children are always in a low state of health and are stated to be frequently convalescent from one of the exanthemata, particularly measles. A somewhat similar condition sometimes affects elderly debilitated people, especially if they have foul teeth and gums and are suffering from albuminuria or diabetes. The condition starts in an abrasion of the mucous membrane which quickly becomes inflamed and gangrenous. A foul slough forms and the gangrene spreads superficially and deeply. Sometimes even the bones are involved and become necrotic. The clinical course of the illness is marked by profound toxæmia, septicæmia is not unusual and death is preceded by collapse and coma. The treatment adopted is generally surgical and if undertaken early may be successful. An interesting report has recently been published by Bouillat on work done by himself and Ramiandrasca.[2] These authors adopted the hypothesis that *cancrum oris* is probably a disease related to scurvy, and acting on this assumption have treated forty-eight sufferers with large doses of vitamin *C* given parenterally. The average dose was five hundred milligrammes of ascorbic acid a day. The mortality among their patients was much less than that usually reported in the literature. They point out that whereas formerly three patients died for every one who recovered, in their series three patients recovered for every one who died. The effect of the treatment was that after about four days the gangrenous process was arrested and cachexia began to diminish. The patient's general condition began to improve because it soon became possible to give an abundance of proper food. Cicatrization of the lesions was rapid; this is shown by photographs of two patients taken at intervals of two or three months in the course of their treatment. Bouillat and Ramiandrasca hold that their results make it possible to affirm that there is in *cancrum oris* at least a deficiency of vitamin *C*. This may be brought about by insufficient food, by lack of intestinal absorption, or by excessive consumption of the vitamin by the organism in diseases such as pertussis and measles. While it is unwise on the evidence to attach too much importance to a vitamin *C* deficiency as a direct cause of this disease, these authors have advanced a good working hypothesis which should not be forgotten.

[2] *Revue de la science médicale française du Moyen-Orient*, October, 1942.

Abstracts from Medical Literature.

DERMATOLOGY.

Generalized Moniliasis.

L. TULIPAN AND E. MUSKATBLIT (*Archives of Dermatology and Syphilology*, November, 1942) report a case of generalized moniliasis. The dermatosis was generalized and involved the scalp, angles of the mouth, axillæ, mammary folds, external genitalia and groins. The right thumb, left index finger, ring finger, toe webs and great toe nails were also affected. The parts affected showed erythema, scaling, pinhead-sized to pea-sized closely aggregated papules, partly eroded and oozing and resembling the moist papules of syphilis. The coalescence of these lesions produced large eroded moist surfaces in the axilla and the mammary folds, about the genitalia and in the groins. Some lesions on the scalp resembled psoriasis. The affected fingers showed a decided paronychia, and the nails were discoloured, lustreless, dull and broken off. The toe webs were scaly and macerated. An interdigital erosion appeared between the right middle and ring fingers. Several successful autoinoculations proving the pathogenicity of *Monilia* and other yeast-like fungi in producing eruptions are cited from the literature. In the author's case the clinical diagnosis of generalized moniliasis was proved by the production of similar lesions by autoinoculation and the recovery of the responsible fungus in pure culture. Any generalized eruption having features similar to the case described by the author deserves study from the point of view of moniliai infection. The responsibility of *Monilia* and other yeast-like fungi as the ætiological agents in any given case needs to be proved, because these fungi may vegetate harmlessly on human skin.

Lichen Planus.

P. C. BAIRD (*The New England Journal of Medicine*, June 18, 1942) states that of the neurogenic, toxic and microbic theories of causation of *lichen planus*, the first is probably the most popular amongst writers. However, very little convincing evidence regarding causation has accumulated, and no tangible clues to the specific ætiology have been found. The treatment has not advanced beyond the empirical stage, and is still chiefly a matter of mercury, arsenic, bismuth and exposure to X rays. However, the use of vitamin *B* complex, as recommended by Burgess, may prove a worthy contribution. The diagnosis of *lichen planus* is not difficult in most cases. The primary lesion of *lichen planus* is a shiny, flat-topped angular papule, which nearly always presents a violaceous tinge. The papules of *lichen planus* may develop in rows along scratch marks. Favourite areas of distribution include the flexor surfaces of the wrists, the inner aspect of the legs and thighs, the penis and the mucous membrane of the mouth and lips. The mucous membrane changes may be of the nature of silvery stippling, or a flat whitish lace-like network, or whitish patches or streaks. The mucous membrane lesions may resemble leucoplakia. In extent the disease may vary from a few papules to involvement of practically the whole body surface. Pruritus may vary in degree from mild discomfort to intolerable agony. *Lichen planus* must be differentiated from other papulo-squamous eruptions such as psoriasis, parapsoriasis and secondary syphilis. It is advisable to apply Wassermann and Kahn tests to the blood in every case of *lichen planus*. *Lichen planus* may be limited in its distribution to the vulva and this may become of interest to surgeons, gynæcologists and obstetricians who must differentiate it from *kraurosis vulvæ* and leucoplakia. *Lichen planus* possesses a histological structure that may be regarded as pathognomonic. Cases of both conjugal and familial *lichen planus* have been reported and this seems to be an argument for the theory of infection. According to Guttmann, modern work has failed to show any connexion between the nervous system and *lichen planus*. Other observers, however, believe that the disease can be precipitated by mental disturbance. Treatment consists mainly in mercury, arsenic, bismuth and the application of X rays. As previously mentioned, bismuth is less effective than arsenic, but is advisable for use at the start of treatment because its complications are fewer. Arsenic may be substituted if the therapeutic response to bismuth is inadequate. Arsenic and bismuth may be combined by administering "Bismarsen". Arsenic can be administered as a 2% solution of sodium arsenate given subcutaneously, the initial dose being two minims which is increased daily by one minim until a dose of 20 or 30 minims is reached. Fowler's solution may be given by mouth or the arsenic may be given by mouth in the form of Asiatic pill. Treatment for four to six weeks is usually necessary before the effects of arsenicals are visible. In a series of cases, some of which had defied the usual treatment for years, Biberstein succeeded in curing 70% of patients by injecting extracts of the papules. Burgess states that in his series of 25 cases, vitamin *B* complex as a whole, rather than any special constituent, seemed to be effective. He found that such treatment was much less successful if mental unrest continued and was more effective if nervous stress and strain could be relieved by rest and reassurance. Chloral hydrate is the safest soporific to employ. Phenobarbital may be used, but morphine should be avoided. Topical applications are of no value except to control discomfort. Antipruritic remedies may be made up in aqueous or alcoholic solutions or in a vanishing cream base.

Eczema and Pruritus in the Aged.

L. E. ANDERSON (*The New England Journal of Medicine*, October 29, 1942) states that a diagnosis of senile eczema or pruritus is too often made just because the patient is aged. Even when one is presented with the picture of pruritus without gross and atrophic skin, the diagnosis of senile pruritus should not be made too readily without a consideration and elimination of other possible explanations. The patient may have threshold jaundice, for example, from early obstruction due to cancer. The various types of pruritus are described by the author. Senile pruritus occurs in both men and women, usually over sixty years of age. The exciting cause of senile pruritus is atrophy of the entire thickness of the skin including its appendages, which results in a thin, dry, irritable skin and leads to generalized itching. The author then discusses psychoses and psychoneuroses. Diabetes can be diagnosed or excluded by examination of the urine and blood-sugar determination and the glucose tolerance test. Jaundice is a well-known cause of generalized itching. Itching also occurs in Hodgkin's disease, lymphatic and myelogenous leuchæmia, lymphosarcoma and *mycosis fungoides*. *Dermatitis hiemalis* (winter itch) and bath itch are considered together. Urticaria is distinguished by the presence of wheals, with which everyone is familiar, and the eruption is scarcely likely to be confused with eczema. Drugs such as morphine and cocaine, taken by addicts, can produce generalized pruritus. Parasitic conditions such as scabies and *pediculus corporis* have to be considered. Psoriasis can be very pruritic when it is acutely generalizing. *Lichen planus* is characterized by pruritus, but diagnosis is easy, even in excessive eruptions, because of the presence of violaceous polygonal flat lichenoid papules with a characteristic sheen and almost no scale. *Dermatitis herpetiformis* is a rare dermatitis of multiform character, but showing almost always some herpetiform grouped vesicles. Contact sensitivity to wool or other articles of clothing can produce pruritus or eczematous eruptions. In general, treatment should be aimed at the causative and contributing constitutional and psychoneurogenous factors in generalized itching, and antipruritics used as adjuncts. The author issues a warning against the use of cocaine derivatives which not uncommonly produce contact dermatitis. Witch-hazel water and alcohol have antipruritic value and plain hot or iced water often controls an itching bout. An oatmeal bath is useful in generalized itching and should usually be followed by the application of an oily lotion which may contain such antipruritics as 1% to 2% phenol, 0·5% or 0·25% menthol or camphor or some *Liquor Carbonis Detergens*. If lichenification is present in chronically scratched areas, 5% to 10% oil of cade or pine tar in cold cream or ointment may be used.

Disseminated Neuro-Dermatitis.

M. F. ENGMAN AND R. C. MACCARDLE (*Archives of Dermatology and Syphilology*, September, 1942) state that chronic disseminated neuro-dermatitis, or atopic dermatitis, has long been recognized as a distinct well-defined entity, and quote Sulzberger and Brunsting, who have shown that *lichen simplex chronicus* or localized neurodermatitis and chronic disseminated neuro-dermatitis are not identical. Disseminated neuro-dermatitis begins usually in infancy and undergoes exacerbations and remissions, as does the adult form. More or less permanent remission finally occurs. The patient may remain normal as far as neurodermatitis is concerned for the rest of his life, or the disease may recur in the adult form. Recurrences usually appear at puberty. In the adult phase the characteristic lesion is a chronic dermatitis with lichenification. The

typical distribution is on the forehead, eyelids, sides of the face and sides of the neck, and in the cubital and popliteal spaces. Pigmentary abnormalities are frequent, especially in quiescent or in healed areas. The authors are not prepared to state that allergy is not the basis of the disease, but since allergic studies have thrown no light on how this dermatitis is produced and have not given any encouraging therapeutic results, they have decided to look elsewhere for possible facts as to the cause of neuro-dermatitis. They are also no more satisfied with a neurogenic explanation of the disease than with an allergic one. The authors discuss the endocrine aspects and quote various investigators. In an attempt to throw new light on the problem, biopsy specimens of skin were obtained from both diseased and apparently normal or unaffected areas. Each specimen was studied in three ways, namely, histologically, spectrographically and by microinceration. These studies revealed fundamental differences between the skin of patients with neuro-dermatitis and that of normal and pathological controls. Deficiency in magnesium was most striking. Artificially induced magnesium deficiency in albino rats was accompanied by dermatitis, general calcification of the tissues and parathyreoid enlargement.

UROLOGY.

Carcinoma of the Prostate.

P. J. KAHLE, H. D. OGDEN AND P. L. GETZOFF (*The Urologic and Cutaneous Review*, October, 1942) state that there is general agreement about the present gloomy outlook in prostatic carcinoma. Theoretically, the ideal treatment is complete surgical extirpation, but practically even when patients are seen early enough, the results of radical surgery are not good. Suprapubic cystostomy has largely been replaced by perurethral resection as a palliative measure, and to this irradiation has been added. To these methods, two others have recently been added—castration and endoscopic resection followed by irradiation of the testes. The new method aims at the elimination of sources of androgen production, and the results in the small series on record so far are very good. However, all sources of androgen production are not eliminated by the above measures, and they should be supplemented or replaced by the intramuscular injection of the œstrogenic substance di-ethylstilbœstrol-dipropionate. In the past two years, the authors have treated 13 patients by this method. Seven have previously been reported elsewhere. Most of the 13 were in very poor general condition, and four were very ill indeed. Biopsy was carried out before therapy in 12 cases, and after treatment in 10. The initial treatment was five consecutive daily intramuscular injections of five milligrammes of the drug, dissolved in oil. Thereafter, the drug was injected three times per week, for varying periods. One patient with metastatic bone lesions was treated for six months, but a series of skiagrams showed gradual retrogression of the bony lesions. Endoscopic resection was limited to the removal of two grammes or less of tissue for biopsy. The clinical improvement shown by most of the patients was practically all due, therefore, to the œstrogenic therapy. Histologically the retrogressive changes commenced with nuclear degenerative changes and vacuolization of the cytoplasm, followed by displacement towards, and finally extrusion into, the acinar lumina of the degenerated nuclei.

A PRELIMINARY report on 37 cases of prostatic carcinoma treated by orchidectomy and stilbœstrol is made by R. Chute and A. T. Willetts (*New England Journal of Medicine*, December 3, 1942). The diagnosis was confirmed pathologically in all but four cases, and in these the clinical and radiographic evidence was unequivocal. The effect of castration is accelerated by the addition of stilbœstrol therapy and this combination was used generally. The efficiency of stilbœstrol alone is equal to that of the combined treatment, but lasts only so long as the administration is continued, whereas the effect of castration is permanent. The benefits resulting from the treatment were rapid and lasting relief of pain due to mestastases; improvement in appetite, weight and strength; a feeling of well-being and reduction in size and softening of the prostate gland. No evidence of diminution in the size of metastases was found. Determination of the serum acid phosphatase showed that when the pre-operative level was above normal, it fell rapidly after castration and was further reduced by stilbœstrol. Alkaline phosphatase usually rose after castration with or without stilbœstrol. Libido and potency are absent after either form of treatment, but no dangerous or harmful effects were observed. Any minor unpleasant effects disappeared rapidly when the dose was reduced. To diminish the psychological effect of orchidectomy an intracapsular method is practised and is cosmetically more effective.

E. P. ALYEA AND A. F. HENDERSON (*The Journal of Urology*, December, 1942) discuss a series of 40 patients treated for carcinoma of the prostate by orchidectomy. One death occurred from carcinomatosis, but in all the remaining cases the patients showed immediate clinical improvement, particularly in regard to pain due to metastases. The serum acid phosphatase may be normal in carcinoma of the prostate even in the presence of metastases. However, a high serum acid phosphatase content probably always means carcinoma. The serum acid phosphatase level dropped with removal of the androgen by castration or ventralization by œstrogen. Changes in the primary growth were evident clinically and at autopsy. Radiographic evidence suggests the healing of the metastases in bone and in four cases metastatic tumour of the lungs disappeared. Stilbœstrol causes regression of the primary growth and clinical improvement, but not to the same extent as castration. It is indicated in cases not responding to castration and to relieve hot flushes.

R. CHUTE, A. T. WILLETTS AND J. P. GENS (*ibidem*) state that injection of ten milligrammes of stilbœstrol per day for five to ten days immediately following castration augments the beneficial effects rapidly. Stilbœstrol alone has the same effect, but it disappears when the injection is discontinued. The effects of castration are slower to appear, but are permanent. No harm comes of this dosage of stilbœstrol nor from the oral administration of two or three milligrammes for nine months. After castration loss of libido and potency is permanent. During administration of stilbœstrol unpleasant side-effects are loss of libido and potency, tenderness and hypertrophy of the breasts, anorexia and occasionally nausea. These authors noted no improvement in metastases radiographically over a period of six months. The intracapsular method of castration is described.

A. RANDALL (*ibidem*) describes five cases in which orchidectomy or transurethral resection was performed for carcinoma of the prostate eight years ago. The survival periods were 17 months, three and a half years, 43 days and eight months; one patient is still alive, but has urethral obstruction and metastases. None is cured of his malignant disease. The author states that current work is more scientifically treated and holds some promise, but records these facts "before a wave of enthusiasm (and of castration) passes over this country".

Primary Carcinoma of the Ureter.

L. E. MCCREA (*The Urologic and Cutaneous Review*, August, 1942) states that 161 cases of primary carcinoma of the ureter have been reported in the literature in about 100 years, and he adds two personal cases. The commonest site is the lower third of the duct, and the predominant type is papillary carcinoma. In the author's two cases, the tumour projected through the ureteric orifice into the bladder. In all cases, the proper treatment is complete nephro-ureterectomy, including removal of the intramural portion of the ureter. Hæmaturia occurs in 75% of cases, and appears early in the disease. Pain, of costovertebral localization, occurs in 65% of cases. Swelling of the kidney, usually due to hydronephrosis, is noted in many cases. The average age incidence is about 55 years. Excretion and retrograde pyelography are valuable in diagnosis.

Lipomatosis Renalis.

L. E. NOLAN AND C. H. ENGELFRIED (*The Urologic and Cutaneous Review*, October, 1942) state that fatty substitution of the kidney under the influence of chronic infective processes is not such a rare disease as it was formerly thought to be. Only 113 cases have actually been reported, though very many more must have occurred in recent years. The authors add one personal case to the literature. Clinical diagnosis of the actual condition is very difficult because of the lack of specific signs and symptoms. The pathogenesis is on a basis of fatty replacement by hyperplasia in the perirenal and peripelvic fat following atrophy of the renal parenchyma, due to underlying pathological conditions such as pyelonephritis, nephrolithiasis, renal tuberculosis, arteriosclerosis and renal hyperplasia. The usual treatment is nephrectomy, when the condition is unilateral. On examination, a filling defect is found in the pyelogram, and a functionless painful kidney and chronic infection are present.

British Medical Association News.

ANNUAL MEETING.

A MEETING of the Tasmanian Branch of the British Medical Association was held at the Tasmanian Museum, Hobart, on February 13, 1943, DR. W. E. L. H. CROWTHER, D.S.O., the President, in the chair.

Annual Report of the Council.

The annual report of the Council was read and adopted. The report is as follows.

The membership of the Branch, which was 97 at the beginning of 1942, was 98 at the beginning of 1943. Nine members have been transferred from other Branches, two have been elected, and ten have resumed membership through payment of their overdue subscription; while two have left the State, two have died, and sixteen have lapsed through non-payment of their subscription for 1942.[1]

Thirteen general meetings of the Branch have been held, the average attendance being 14·4, compared with 15·4 last year.

Papers have been read by Dr. E. Brettingham Moore, Dr. A. B. Cunningham, Dr. N. B. G. Abbott, Dr. T. Butler, Dr. B. Hiller, Dr. R. Whishaw, Dr. F. Phillips, and Major B. K. Rank; and cases have been described or demonstrated by Dr. T. Butler, Dr. J. P. Millar, Dr. R. Whishaw, Dr. W. Freeman, Dr. B. Hiller, and by Dr. J. B. G. Muir, and the resident medical officers of the Royal Hobart Hospital.

Attendance at Council Meetings.

Meetings of the Branch Council have been held, the attendances being as follows: Dr. W. E. L. H. Crowther (8), Dr. A. Pryde (2), Dr. S. Gibson (3), Dr. J. A. Newell (1), Dr. B. Hiller (9), Dr. C. R. D. Brothers (5), Dr. C. Craig (6), Dr. J. S. Reid (5), Dr. J. P. Millar (9), Dr. I. Birchall (2), Dr. J. Walch (9).

Representatives.

Members who have been appointed to represent the Branch on outside bodies are as follows: on the Federal Council, Dr. C. Craig and Dr. J. S. Reid; on the Federal Council's Contract Practice Committee, Dr. J. Rail Robertson; on the Tasmanian Medical Coordination Committee, Dr. W. W. Giblin; on the State Board of Advice on Tuberculosis, Dr. W. Crowther.

Dr. Gregory Sprott.

The Branch has suffered the loss through death of a former President, Dr. Gregory Sprott, and one of its senior members, Dr. G. A. Walpole, of Latrobe.

Other Matters.

Among matters which have received consideration by the Branch Council during the year the majority have been problems concerned with war emergency organization, which have been referred by the Federal Council for the comments or information of the Branch Council. Such matters include correspondence with the income tax authorities concerning gas producers and schemes for protection of practices, an agreement with the Repatriation Commission concerning the medical care of widows, orphans and widowed mothers of deceased soldiers, a proposed agreement with the Allied Works Council concerning the medical examination and treatment of its employees, regulations for the control of alien doctors, and the medical coordination and equipment regulations. Much time has been given to consideration of the several schemes for a national medical service which have been drawn up by different bodies, and to comparisons and criticisms of these schemes. In this connexion the Federal Council has asked the Branch Council to call a convention of representatives of all groups or organizations of medical practitioners in the State for the purpose of formulating the views of the whole profession for presentation to the Federal Government.

[1] Six of these have resumed membership since the beginning of the year.

Financial Statement.

The Honorary Treasurer presented the balance sheet and financial statement for the year. The statements, which are published herewith, were adopted.

The Northern Division.

The annual report of the Northern Division was read and received.

Election of Office-Bearers.

The following office-bearers were elected for the ensuing twelve months:

President-Elect: Dr. B. Hiller.
Vice-President: Dr. F. W. Fay.
Members of the Council: Dr. W. E. L. H. Crowther, Dr. R. Whishaw, Dr. C. R. D. Brothers.
Honorary Treasurer: Dr. J. P. Millar.
Honorary Secretary: Dr. J. H. B. Walch.
Auditors: Messrs. Adams and Bennetto.

Induction of President.

Dr. W. E. L. H. Crowther vacated the chair in favour of Dr. A. Pryde, who thanked members for his election.

Retiring President's Address.

Dr. W. E. L. H. Crowther, the retiring President, read his address entitled "A Surgeon as Whale-Ship Owner" (see page 549).

THE BRITISH MEDICAL ASSOCIATION (TASMANIAN BRANCH).

Statement of Receipts and Payments for the Year ended December 31, 1942.

RECEIPTS.

	£	s.	d.
To Balance brought forward	291	13	10
„ Members' Subscriptions—			
1941 £47 16 3			
1942 £356 11 6			
	404	7	9
„ Interest on Commonwealth Inscribed Stock	19	17	6
„ Transfer from National Health Emergency Fund Account	2	13	7
„ Interest on Debenture, Australasian Medical Publishing Company Limited	4	15	0
„ Interest on Fixed Deposit at Hobart Savings Bank	4	19	6
	£728	7	2

PAYMENTS.

	£	s.	d.
By Northern Division, B.M.A.	26	0	0
„ Southern Division, B.M.A.	24	0	0
„ B.M.A., London	133	12	6
„ Australasian Medical Publishing Company Limited	59	0	0
„ Branch Council, B.M.A.	8	0	0
„ J. Walch, Honorarium	30	0	0
„ Assistants' Fee, Postage *et cetera*	42	8	4
„ Adams and Bennetto, Audit Fee	2	2	0
„ Printing and Stationery	3	19	9
„ Bank Charges, Cheque Books	1	8	4
„ Balance carried forward	397	16	3
	£728	7	2

STATEMENT OF ASSETS.

	£	s.	d.
Cash at Banks	403	13	2
Deposit, Hobart Savings Bank	150	0	0
Commonwealth Inscribed Stock	300	0	0
Australasian Medical Publishing Company—Debentures	95	0	0
War Savings Certificates	106	8	0
Commonwealth Loan	300	0	0
Furniture at Library	20	0	0
	£1,375	1	2

Audited and found correct.

ADAMS AND BENNETTO,
Chartered Accountants (Aust.),
Auditors.

Medical Societies.

MELBOURNE PÆDIATRIC SOCIETY.

A MEETING of the Melbourne Pædiatric Society was held on March 10, 1943, at the Children's Hospital, Carlton, DR. WILFRED FORSTER, the President, in the chair.

Subacute Pyloric Stenosis.

DR. ROBERT SOUTHBY showed a male infant, aged nineteen weeks, who was a full-time baby and weighed eight pounds at birth. He was breast fed. The baby progressed quite well for three weeks, and then began to vomit; the vomiting increased in intensity as the days passed. Five or six relaxed brownish stools were passed per day, but in the last three weeks the motions became constipated. The child gained weight very slowly and at eighteen weeks weighed ten pounds three ounces.

On examination, the baby was pale and wasted with hypotonic muscles; his appearance resembled the picture of nutritional anæmia, but the hæmoglobin value was 116% and the erythrocytes numbered 6,000,000 per cubic millimetre, a frequent finding in dehydrated babies. The outstanding feature was the enormous distension of the upper part of the abdomen and the pronounced visible peristalsis. No tumour was felt. Examination of the gastric contents revealed abundant free hydrochloric acid. A provisional diagnosis of pyloric obstruction was made. A barium meal examination showed the greater bulk of the barium to be still in the stomach after four hours. It also revealed enormous dilatation of the stomach. Even after twenty-four hours some barium remained in the stomach.

Dr. Southby said that this was not the typical clinical picture met with in hypertrophic pyloric stenosis of infancy. The lesion progressed in a subacute way, and only now at the age of nineteen weeks did the child present signs of complete obstruction. The frequent bowel actions until quite recently were also unusual. A number of similar cases had been described by Landerer and Meyer. They gave the name of congenital simple pyloric stenosis to the condition, as distinct from hypertrophic pyloric stenosis. The patients were supposed to provide eventually a group of adult patients with distension of the stomach and stenosis of the pylorus. The pathological abnormality was protrusion of the mucosa into the pylorus rather than muscular hypertrophy.

DR. H. BOYD GRAHAM said that Dr. Southby was unfortunate to have such a patient in his care; the lesion was neither one thing nor another. With regard to treatment, it was reasonable to use antispasmodics to the full to relieve any spasm that might be present. If physical obstruction was present, surgical intervention was indicated, and in any case if no improvement occurred, exploratory operation with a view to possible gastro-enterostomy was indicated. It was possible that some duodenal stenosis existed.

DR. KEITH HALLAM said that a static X-ray film was not nearly so informative as fluoroscopy. The films shown revealed remarkably good tone in the stomach and gross mechanical obstruction. The duodenum was not shown, and duodenal compression by vessels passing over the third part might well be present. Operative treatment was indicated.

DR. WILFRED FORSTER thought that the stomach should be examined under anæsthesia and an effort made to feel a tumour. He asked how one could differentiate the condition from pylorospasm, and secondly, how one should treat pylorospasm by "Eumydrin".

Dr. H. Boyd Graham said that he had had experience with "Eumydrin" and that there was nothing mystic about its administration. The dosage was five cubic centimetres of a 1/10,000 solution before each feeding. The drug was just as efficacious as atropine and much safer. Unfortunately, it was not available for use at present.

Dr. Southby, in reply, agreed to the necessity for examination under anæsthesia. Pylorospasm was distinguished from the condition by earlier vomiting, perhaps not after every feeding, and the absence of total "hold-up" in the barium meal. The giving of one teaspoonful of barium sulphate in a feeding often had a pronounced therapeutic effect in cases of pylorospasm. The present case was unusual, in that the child had attained the age of nearly five months, though vomiting began at three weeks, and also because of the frequency of the bowel actions in the first sixteen weeks of the illness.

Pathological Fracture of the Humerus.

DR. B. R. HALLOWS showed a girl, aged twelve years. Ten months earlier she had fallen out of a truck and struck her left shoulder. Three days later she complained of pain in the upper part of the left arm and was unable to raise her arm to a right angle from the side. On examination, no wasting was found, but tenderness was present over the upper third of the left humerus, on the antero-lateral aspect. There was no sensory disturbance and no evidence of wrist drop. The X-ray examination revealed no abnormality, and a provisional diagnosis of axillary nerve trauma was entertained. Three days later, the temperature was 101° F. and the arm was swollen and tender. Three days later still, the whole of the left arm was œdematous and hot. Maximal tenderness was present two inches below the greater tuberosity. The diagnosis was revised to osteomyelitis of the upper end of the humerus. The child was admitted to hospital and treated conservatively. She responded satisfactorily and was discharged from hospital after two and a half weeks, with an aeroplane abduction splint. Progress was apparently favourable, and pain was no longer felt. Three months after the injury the child was allowed out of the splint for one hour twice a day. A routine X-ray examination made two weeks later revealed a pathological fracture of the humerus, with evidence of union taking place; sequestrum formation was also demonstrable in the film.

DR. ROBERT SOUTHBY asked whether the aeroplane might have crashed with the girl in it.

DR. ERIC PRICE thought that the aeroplane splint was well tolerated, provided there was nothing wrong with the arm. He said that if a lesion existed it was a different matter. The splint sagged and the patient had difficulty in holding it up. The effect was to induce the very type of deformity depicted in the case under discussion. For more satisfactory results, a choice should be made between abduction with the patient in bed and the plaster spica. This coincided with the view of Watson-Jones. With regard to osteomyelitis, conservative treatment was gaining ground. They should evolve and practise uniform ideas in the management of such patients. Some years ago the procedure recommended was barbarous, huge gutters being cut in the bone. Dr. Price had experienced 100% mortality with such methods. Nowadays the operative procedure was more conservative, and though operation was not as a rule an urgent matter, it was indicated, since they were dealing with pus under tension. There were three indications for operation: (i) toxæmia, (ii) pain, and (iii) the determination of a favourable direction of spread away from the joint. These could be met by a simple incision, drainage and immobilization. With Brodie's abscess or sequestrum formation operation also was necessary; but in certain subacute cases conservative treatment could be adopted.

Dr. Hallows, in reply, expressed agreement with Dr. Price's views. He said that he was anxious to learn whether the aeroplane splint should be used except in the presence of special indications. Deformity might have been prevented by more serial X-ray films; but he was led astray by the good general condition of the patient. Two views were held on the pathology. In one the condition was regarded as primarily a septicæmia with secondary localization in bone; conservative measures appeared more rational on this basis. In the other it was held that the bony lesion was primary, and that spread occurred locally and generally. It might be necessary to strike a balance between these two views. Dr. Hallows was struck by the mobility of the child with such a gross deformity, and also by the response of the shaft of the bone to its new alignment. The removal of the sequestrum was another point that needed consideration.

Case for Diagnosis.

DR. W. W. MCLAREN showed a girl, aged two and a half years. There was nothing relevant in the past history. Her mother suffered from pulmonary tuberculosis. The child's illness had begun five weeks earlier, with the sudden onset of fever and of pain in the right thigh. There was no muscle tenderness, and movements were full at the right hip joint. The urine contained many pus cells and also albumin. Both the pyrexia and the urinary abnormalities diminished after the exhibition of an alkaline mixture. However, the fever relapsed and had to be controlled with sulphathiazole. This excited vomiting, and had to be discontinued. At this stage slight neck stiffness was observed. There was also inability to bend the back, and pain was experienced on flexion of the spine. The temperature rose again, and the administration of sulphathiazole was repeated. The neck stiffness increased, and Kernig's sign was elicited.

Under anæsthesia the pelvis was explored, with negative findings, and lumbar puncture was performed. The needle penetrated a boggy mass apparently just before the dura was reached, and a few drops of very turbid fluid were obtained. The remaining fluid obtained by further insertion of the needle was only slightly turbid. The fluid on culture yielded *Staphylococcus aureus* in large quantities. A day or two later, lumbar puncture was repeated, and the needle again penetrated a soft granulation tissue mass, pus being encountered. The cerebro-spinal fluid was not turbid; again it yielded *Staphylococcus aureus* on culture. "M & B 693" was given intravenously. Suppression of urine resulted, but this was controlled with alkali. An X-ray examination of the spine including the pelvis produced negative results. The child was placed on a Bradford frame, and during the last eight days her temperature had been normal and her general condition had vastly improved. However, she still objected to flexion of the spine.

DR. J. W. GRIEVE said that he had the impression that the condition was osteomyelitis of the vertebral column. The case was interesting in that the onset was with pain in the right thigh, suggesting root pain. The X-ray finding was negative, but a considerable time must elapse before this could be appreciated. It was possible that meningitis also existed, and responded to the therapy employed. Another interesting point was the subsidence of the temperature with immobilization. Dr. Grieve thought the child could with benefit be shown at a subsequent meeting of the society.

DR. F. P. MORGAN wondered whether, in the absence of the signs of osteomyelitis, the lesion might be an epidural granuloma. This existed in the acute, subacute and chronic forms, and might make its appearance without accompanying pathological changes in the surrounding bones or elsewhere.

Dr. McLaren asked Dr. Morgan what was the course of such lesions.

Dr. Morgan replied that some resolved, and others became chronic and needed operation later. At the present time, Dr. Morgan was treating at another hospital a patient with a spinal tumour. In this case, pus was found in the epidural space.

DR. W. FORSTER was impressed by the spinal rigidity in the case under discussion, and thought that some bony lesion probably existed. He recalled a famous case which had occurred some years earlier at the hospital, and which had occasioned many doubts as to diagnosis. It had many of the features of the case under discussion, and the ultimate diagnosis was osteomyelitis of the spine. There were four or five cases of that nature at the Frankston branch. Often three months elapsed before any X-ray evidence of bony change was visible.

DR. ERIC PRICE said that osteomyelitis of the spine was peculiar, in that frequently it failed to produce external signs of pus. Change in the intervertebral duct, especially narrowing, he thought an important early sign.

Dr. McLaren, in reply, thanked the speakers for their contributions. He still thought the diagnosis was unproven, and that the case should be considered as "some bony lesion of the spine".

(To be continued.)

Post-Graduate Work.

MID-WINTER COURSE OF LECTURES IN SYDNEY.

THE New South Wales Post-Graduate Committee in Medicine announces that a course of lectures will be held at 4.30 p.m. each Monday afternoon at the Stawell Hall, 145, Macquarie Street, Sydney, beginning on July 5, 1943. The programme of the first part of the course is as follows:

Monday, July 5.—Lectures to be given by medical officers of the United States Navy. (No fee will be charged for attendance at this session.)

Monday, July 12.—"The Present Position of the Sulphonamides (Medical Aspects)": Dr. Adrien Albert and Major T. McP. Brown (118th General Hospital, United States Army).

Monday, July 19.—"The Clinical Significance of Variations in Blood Pressure Readings, Cardiac Arrhythmias and Albuminuria": Sir Charles B. Blackburn.

"Vascular Disorders of the Limbs": Dr. G. C. Willcocks.

Monday, July 26.—"Migraine and Migrainous Headaches": Dr. Harold Ritchie.

"Chronic Inflammatory Diseases of the Lung": Dr. A. J. Collins.

Monday, August 2.—"Fluoroscopy in Cardiac Examinations": Dr. Alan Holmes à Court.

"Endocrine and Hormonal Therapy": Dr. E. H. Stokes.

Monday, August 9.—"Virus Diseases of the Nervous System": Dr. S. A. Smith.

"Hepatitis": Dr. C. G. McDonald.

Monday, August 16.—"The Present Position of the Vitamins": Professor H. Priestley.

The lectures will continue each Monday afternoon until September 27, 1943. The programme of the remaining six lectures will be published shortly.

The fee for attendance at this course of lectures is one and a half guineas for twelve lectures, or half a guinea for a series of four lectures. Medical officers of the Australian and allied forces are invited to attend free of charge. Those wishing to attend should make application to the Secretary of the Committee, 145, Macquarie Street, Sydney.

National Emergency Measures.

BUTTER RATIONING AND DIABETIC PERSONS.

IT will have been noted from the official announcement on the rationing of butter that special provisions have been made for diabetic persons to obtain a supplementary ration of butter. The Acting Director of Rationing has supplied the following information as to the procedure to be followed and has asked that it be brought to the notice of members of the medical profession by medium of this journal.

All diabetic persons should make application to the Deputy Director of Rationing in the capital city of the State in which they reside, giving the following information: (*a*) full name and address of applicant, (*b*) identity card number, (*c*) ration book number.

They must also submit a certificate from a registered medical practitioner, certifying that they are suffering from *diabetes mellitus* and stating the total amount of butter (in ounces) per week which they should receive. The address, as well as the signature, of the medical practitioner should, of course, appear on the certificate, and it should be dated.

Arrangements have been made for these applications to be dealt with expeditiously so that as little delay as possible will be incurred. Diabetic persons will then be issued supplementary butter coupons, which with the use of the coupons from their ration books, should provide them with the quantity of butter required. Special provision has been made for an immediate supply without medical certificate to those persons who are at such a distance from a medical practitioner that there may be difficulty in obtaining a medical certificate, but after the initial issue of supplementary butter coupons they will be required to furnish a medical certificate for further issues. In the case of those persons who have been affected for some time prior to the adoption of rationing, coupons sufficient for a year will be issued, but in the case of persons recently affected the period will be for either three or six months, thus giving the opportunity of reviewing the amount of butter required.

The Acting Director of Rationing realizes that this will mean extra work for practitioners, but in view of the aim of rationing, so to reduce the consumption of butter that additional supplies may be available to Britain, feels sure that the medical profession will assist in this effort.

Correspondence.

A CASE OF ACUTE SCLEREMA.

SIR: The report in the journal of May 22, 1943, by Dr. R. Kennedy of a case of sclerema in a newborn infant brings up for discussion this interesting condition. It is unfortunate that much confusion in nomenclature exists. A person seeing many newborn infants meets with several similar cases every year, of allied conditions which embrace the "sclerema group", namely, (*a*) œdema due to subnormal temperature, (*b*) sclero-œdema, (*c*) sclerema.

These three entities are, I feel sure, all progressive stages of the same condition, and their evolution can usually be traced.

The infants who develop this condition are the small, puny, asthenic, full-time infants, or the large premature babies, who since they weigh over five pounds are treated as full times, a *régime* which they are unable to withstand. The clinical course is that owing to weakness, the infants suck badly and fall asleep readily at the breast. They obtain extraordinarily little, are exhausted after slight exertion, and sleep from feed to feed, becoming progressively more difficult to rouse. If test feedings are not done as a routine, the inanition of these babies is overlooked. The temperature is subnormal and becomes progressively lower. The infant becomes œdematous, and his weight, of course, increases. At this stage the œdema is of the ordinary soft pitting type. This is the stage of œdema due to low temperature. By about the fourth day the œdema becomes definitely brawny and can be seen in regions like the thighs to be raised in fairly large areas, but it still pits. This is the stage of sclero-œdema.

If the condition goes on untreated, the classical state of *sclerema neonatorum* will result, with the generalized hard, marble-like state of the subcutaneous tissues.

As has been pointed out, the fœtal fat is laid down *in utero*, where the temperature is higher than when the subcutaneous fat is laid down in extrauterine life. Fœtal and newborn fat has a lower oleic acid content than that of later life, and therefore has a higher melting point. The low temperature reached by the scleremic infants is a factor in the solidification of the subcutaneous fat in these babies.

It is desirable that the condition be detected when the baby is still in the state of simple œdema. He should be thoroughly warmed up with several hot-water bags and his rectal temperature brought to 99° F. Thyreoid (grain one-twentieth per pound of body weight per day) can be given, though it is difficult to assess its efficacy.

It is important that the infant receives its full amount of food. This may have to be given by spoon or gavage, as the babies are generally too asthenic to suck.

Response to treatment in the œdematous and sclero-œdematous types is usually prompt, and most of the œdema disappears in three to four days. Clinically, the condition appears to be produced by lack of food and lack of warmth. As would be expected, it is commoner in cold weather and in cold climates.

The other condition usually classified with the sclerema group has an entirely different ætiology. This is the entity which goes by a variety of names, including "fat sclerema" or "subcutaneous fat necrosis". In this condition, hard indurated areas with irregular margins develop. They may be white, red or livid, and feel like plaques of cardboard in the skin. They develop later than the above conditions of the sclerema group, usually being noticed when the baby is a few weeks old. They occur on the cheeks, about the shoulders, buttocks, thighs and calves, that is, on the convex surfaces and rotundities of the body. It is generally agreed that they are due to obstetric trauma. The areas break up and absorb, though sometimes liquefaction and cyst formation occur. The evolution of their disappearance goes on over a period of months. It would seem desirable therefore that this condition be called obstetric subcutaneous fat necrosis, as the application of the term fat sclerema to it is confusing and misleading.

Yours, etc.,

KATE J. CAMPBELL.

33, Collins Street,
Melbourne,
May 31, 1943.

THE MEETING OF THE FEDERAL COUNCIL.

SIR: In your issue of May 22, 1943, you were good enough to publish our letter to you of May 8, 1943, and we note the reply of Dr. Hunter, the General Secretary of the Federal Council of the British Medical Association in Australia.

Dr. Hunter makes the following criticism of our letter:

1. Concerning the Federal Council's scheme, he says that our assertion that "various amendments to the Federal Council's scheme were then carried . . . there is no amendment concerning the system of payment" is a mis-statement of facts, and then goes on to say that "careful perusal of the general principles which the Council states should govern a medical service will show that no reference is made to the method or methods by which the medical service should be financed"—surely this proves our contention.

2. Dr. Hunter writes that the general principles which the Federal Council states should govern a medical service or the original scheme of the Federal Council contain no reference to the method or methods by which the medical service should be financed. This is true, but it has always been inferred that the Federal Council scheme has as its basis a *per capita* system of payment. Support for this opinion comes from the following:

(*a*) The leading article in THE MEDICAL JOURNAL OF AUSTRALIA of April 24, 1943, referring to the original Federal Council scheme, states: "This scheme was designed to give a service to certain sections of the community with payment on a *per capita* basis."

(*b*) In THE MEDICAL JOURNAL OF AUSTRALIA, August 29, 1942, page 165, Dr. Alan Lee, Federal Councillor and Past President of the Queensland Branch, states: "As regards the health insurance scheme on a panel basis as at present sponsored by the Federal Council of the British Medical Association . . ."

(*c*) In THE MEDICAL JOURNAL OF AUSTRALIA, January 2, 1943, page 5, Dr. H. Boyd Graham, President of the Victorian Branch, referring to the plan of the Federal Council, states: "In that plan, however, there is no arrangement for the method of payment of the doctors, though it can be inferred that *per capita* payments are envisaged."

The above published statements have never been challenged.

3. In submitting our contention that the Federal Council is leaning towards a *per capita* system of payment and against a salaried or fee-for-service system, we adduced certain arguments which were inter-dependent. It is not, in our opinion, fair comment to say that because each separately does not prove our case that collectively they do not do so. Our argument was summarized in the sentence: "Thus it would appear that the Federal Council, by rejecting a salaried service and by rejecting a fee-for-service principle, is leaning towards a *per capita* system of payment and against a salaried or fee-for-service system."

4. Dr. Hunter states that "the Federal Council has referred its policy to the Branches for their approval; and when this approval is given further consideration can and will be given by the Council as to how the policy can be implemented". However, Dr. Hunter's common letter to the Branches covering the report does not state that it was sent for approval or discussion; the Victorian Federal Council representatives are agreed that the report was merely informative and not submitted to the Branches for approval and the minutes of the Federal Council meeting show no reference to such approval being requested. It is of interest that the Federal Council resolved (THE MEDICAL JOURNAL OF AUSTRALIA, April 24, 1943, page 377): "That the resolutions on medical planning adopted at this meeting of the Federal Council be published as the policy of the Federal Council of the British Medical Association in Australia."

Thus it would appear that Dr. Hunter is mistaken in his assertion that the Federal Council has referred its policy to the Branches for their approval, and it would therefore appear that this cannot be regarded as a reason for the delay of the Federal Council to clarify its views on the future of medical practice.

Yours, etc.,

CHARLES BYRNE.
JOHN H. GOWLAND.

Sunshine,
Victoria,
June 2, 1943.

Naval, Military and Air Force.

APPOINTMENTS.

THE undermentioned appointments, changes *et cetera* have been promulgated in the *Commonwealth of Australia Gazette*, Number 119, of June 3, 1942.

NAVAL FORCES OF THE COMMONWEALTH.

Permanent Naval Forces of the Commonwealth (Sea-Going Forces).

Appointment.—Surgeon Lieutenant (for Short Service) Frank Frederick Coffey is appointed Surgeon Lieutenant on the Permanent List, dated 12th January, 1942.—(Amending Executive Minute No. 80 of 1942.)

Citizen Naval Force of the Commonwealth.

Royal Australian Naval Reserve.

Appointments.—Michael Dean Dawson, Franklin Robert Fay and Reginald Roberts Sobey are appointed Surgeon Lieutenants, dated 7th May, 1943.

Grant of Honorary Rank.—Cedric Swanton is granted the honorary rank of Surgeon Lieutenant-Commander, dated 17th May, 1943.

CASUALTIES.

ACCORDING to the casualty list received on June 9, 1943, Lieutenant-Colonel L. MacD. Outridge, A.A.M.C., Gympie, is reported to be a battle casualty suffering from shock.

The Royal Australasian College of Surgeons.

MEETING OF CENSORS.

THE next meeting of the Australian Board of Censors of the Royal Australasian College of Surgeons will be held at the College, Spring Street, Melbourne, probably in September, 1943. Candidates who desire to present themselves at this meeting should apply to the Censor-in-Chief for permission to do so on or before July 31, 1943. The appropriate forms are available at the College, Spring Street, Melbourne, and at the offices of the various State Secretaries.

Nominations and Elections.

THE undermentioned have applied for election as members of the New South Wales Branch of the British Medical Association:

Greenwell, Peter Howard, M.B., B.S., 1941 (Univ. Sydney), 5, Locksley Street, Killara.

Britten, David Abbott, M.B., B.S., 1937 (Univ. Sydney), 100, Keira Street, Wollongong.

The undermentioned have been elected members of the New South Wales Branch of the British Medical Association:

Fleming, Justin Paul, M.B., B.S., 1940 (Univ. Sydney), 65, Muston Street, Mosman.

Norton, John Stanley, M.B., B.S., 1943 (Univ. Sydney), 25, Milroy Avenue, Wollstonecraft.

Perrin, Muriel Enid, M.B., B.S., 1943 (Univ. Sydney), 33, Cliff Road, Northwood.

Sheumack, Donald Robert, M.B., B.S., 1943 (Univ. Sydney), Balmain District Hospital, Balmain.

The undermentioned has applied for election as a member of the Tasmanian Branch of the British Medical Association:

Hing, Sydney Robert, M.B., B.S., 1943 (Univ. Sydney), Royal Hobart Hospital, Liverpool Street, Hobart.

Obituary.

SIMON REDVERS BRAY.

WE regret to announce the death of Dr. Simon Redvers Bray, which occurred on June 5, 1943, at Melbourne, Victoria.

JAMES EADIE.

WE regret to announce the death of Dr. James Eadie, which occurred on June 7, 1943, at St. Kilda, Victoria.

WINIFRED LURLINE DILLON-SMITH.

WE regret to announce the death of Dr. Winifred Lurline Dillon-Smith, which occurred on June 10, 1943, at Sydney.

WALTER JOSEPH MURPHY.

WE regret to announce the death of Dr. Walter Joseph Murphy, which occurred on June 11, 1943, at Bargo, New South Wales.

Medical Appointments.

Dr. James Alexander Rolland has been appointed a member of the Board of Optical Registration of South Australia.

Dr. Janet Paterson Watt has been appointed a Public Vaccinator in the Department of Public Health of Victoria.

Diary for the Month.

JUNE 22.—New South Wales Branch, B.M.A.: Medical Politics Committee.
JUNE 23.—Victorian Branch, B.M.A.: Council.
JUNE 24.—New South Wales Branch, B.M.A.: Branch.
JUNE 24.—South Australian Branch, B.M.A.: Branch.
JUNE 25.—Queensland Branch, B.M.A.: Council.
JULY 1.—South Australian Branch, B.M.A.: Council.
JULY 2.—Queensland Branch, B.M.A.: Branch.
JULY 6.—New South Wales Branch, B.M.A.: Council Quarterly.
JULY 7.—Victorian Branch, B.M.A.: Branch.
JULY 7.—Western Australian Branch, B.M.A.: Council.
JULY 9.—Queensland Branch, B.M.A.: Council.
JULY 13.—New South Wales Branch, B.M.A.: Executive and Finance Committee.
JULY 13.—New South Wales Branch, B.M.A.: Organization and Science Committee.
JULY 13.—Tasmanian Branch, B.M.A.: Branch.

Medical Appointments: Important Notice.

MEDICAL PRACTITIONERS are requested not to apply for any appointment mentioned below without having first communicated with the Honorary Secretary of the Branch concerned, or with the Medical Secretary of the British Medical Association, Tavistock Square, London, W.C.1.

New South Wales Branch (Honorary Secretary, 135, Macquarie Street, Sydney): Australian Natives' Association; Ashfield and District United Friendly Societies' Dispensary; Balmain United Friendly Societies' Dispensary; Leichhardt and Petersham United Friendly Societies' Dispensary; Manchester Unity Medical and Dispensing Institute, Oxford Street, Sydney; North Sydney Friendly Societies' Dispensary Limited; People's Prudential Assurance Company Limited; Phœnix Mutual Provident Society.

Victorian Branch (Honorary Secretary, Medical Society Hall, East Melbourne): Associated Medical Services Limited; all Institutes or Medical Dispensaries; Australian Prudential Association, Proprietary, Limited; Federated Mutual Medical Benefit Society; Mutual National Provident Club; National Provident Association; Hospital or other appointments outside Victoria.

Queensland Branch (Honorary Secretary, B.M.A. House, 235, Wickham Terrace, Brisbane, B.17): Brisbane Associated Friendly Societies' Medical Institute; Bundaberg Medical Institute. Members accepting LODGE appointments and those desiring to accept appointments to any COUNTRY HOSPITAL or position outside Australia are advised, in their own interests, to submit a copy of their Agreement to the Council before signing.

South Australian Branch (Honorary Secretary, 178, North Terrace, Adelaide): All Lodge appointments in South Australia; all Contract Practice appointments in South Australia.

Western Australian Branch (Honorary Secretary, 205, Saint George's Terrace, Perth): Wiluna Hospital; all Contract Practice appointments in Western Australia.

Editorial Notices.

MANUSCRIPTS forwarded to the office of this journal cannot under any circumstances be returned. Original articles forwarded for publication are understood to be offered to THE MEDICAL JOURNAL OF AUSTRALIA alone, unless the contrary be stated.

All communications should be addressed to the Editor, THE MEDICAL JOURNAL OF AUSTRALIA, The Printing House, Seamer Street, Glebe, New South Wales. (Telephones: MW 2651-2.)

Members and subscribers are requested to notify the Manager, THE MEDICAL JOURNAL OF AUSTRALIA, Seamer Street, Glebe, New South Wales, without delay, of any irregularity in the delivery of this journal. The management cannot accept any responsibility unless such a notification is received within one month.

SUBSCRIPTION RATES.—Medical students and others not receiving THE MEDICAL JOURNAL OF AUSTRALIA in virtue of membership of the Branches of the British Medical Association in the Commonwealth can become subscribers to the journal by applying to the Manager or through the usual agents and booksellers. Subscriptions can commence at the beginning of any quarter and are renewable on December 31. The rates are £1 for Australia and £1 5s. abroad *per annum* payable in advance.